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ABSTRACT

This paper presents new homogeneous series on top wealth shares from 1916 to 2000 in the United States using estate tax return data. Top wealth shares were very high at the beginning of the period but have been hit sharply by the Great Depression, the New Deal, and World War II shocks. Those shocks have had permanent effects. Following a decline in the 1970s, top wealth shares recovered in the early 1980s, but they are still much lower in 2000 than in the early decades of the century. Most of the changes we document are concentrated among the very top wealth holders with much smaller movements for groups below the top 0.1%. Consistent with the Survey of Consumer Finances results, top wealth shares estimated from Estate Tax Returns display no significant increase since 1995. Evidence from the Forbes 400 richest Americans suggests that only the super-rich have experienced significant gains relative to the average over the last decade. Our results are consistent with the decreased importance of capital income at the top of the income distribution documented by Piketty and Saez (2003) and suggest that the rentier class of the early century is not yet reconstituted. The most plausible explanations for the facts are perhaps the development of progressive income and estate taxation which has dramatically impaired the ability of large wealth holders to maintain their fortunes, and the democratization of stock ownership which now spreads stock market gains and losses much more widely than in the past.

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1 Introduction

The pattern of wealth and income inequality during the process of development of modern economies has attracted enormous attention since Kuznets (1955) formulated his famous inverted U-curve hypothesis. Wealth tends to be much more concentrated than income because of life cycle savings and because it can be transmitted from generation to generation. Liberals have blamed wealth concentration because of concerns for equity and in particular for tilting the political process in the favor of the wealthy. They have proposed progressive taxation as an appropriate counter-force against wealth concentration.[1] For conservatives, concentration of wealth is considered as a natural and necessary outcome of an environment that provides incentives for entrepreneurship and wealth accumulation, key elements of macro-economic success. Redistribution through progressive taxation might weaken those incentives and generate large efficiency costs. Therefore, it is of great importance to understand the forces driving wealth concentration over time and whether government interventions through taxation or other regulations are effective and/or harmful to curb wealth inequality. This task is greatly facilitated by the availability of long and homogeneous series of income or wealth concentration. Such series are in general difficult to construct because of lack of good data. In this paper, we use the extraordinary micro dataset of estate tax returns that has been recently compiled by the Statistics of Income Division of the Internal Revenue Service (IRS) in order to construct homogeneous series of wealth shares accruing to the upper groups of the wealth distribution since 1916, the beginning of the modern federal estate tax in the United States.

The IRS dataset includes detailed micro-information for *all* federal estate tax returns filed during the 1916-1945 period.[2] We supplement these data with both published tabulations and other IRS micro-data of estate tax returns from selected years of the second half of the century. We use the estate multiplier technique, which amounts to weighting each estate tax return by the inverse probability of death, to estimate the wealth distribution of the living adult population from estate data. First, we have constructed almost annual series of shares of total wealth

[1] In the early 1930s, President Roosevelt justified the implementation of drastic increases in the burden and progressivity of federal income and estate taxation in large part on those grounds.

[2] The estate tax return data was compiled electronically and hence saved for research purposes thanks to Fritz Scheuren, former director of the Statistics of Income division at the IRS.

accruing to various sub-groups within the 2% of the wealth distribution.[3] Although small in size, these top groups hold a substantial fraction of total net worth in the economy. Second, for each of these groups, we decompose wealth into various sources such as real estate, fixed claims assets (bonds, cash, mortgages, etc.), corporate stock, and debts. We also display the composition by gender, age, and marital characteristics. This exercise follows in the tradition of Lampman (1962), who produced top wealth share estimates for a few years between 1922 and 1956. Lampman, however, did not analyze groups smaller than the top .5% and this is an important difference because our analysis shows that, even within the top percentile, there is dramatic heterogeneity in the shares of wealth patterns. Most importantly, nobody has attempted to estimate, as we do here, homogeneous series covering the entire century.[4]

Our series show that there has been a sharp reduction in wealth concentration over the 20th century: the top 1% wealth share was close to 40% in the early decades of the century but has fluctuated between 20 and 25% over the last three decades. This dramatic decline took place at a very specific time period, from the onset of Great Depression to the end of World War II, and was concentrated in the very top groups within the top percentile, namely groups within the top 0.1%. Changes in the top percentile below the top 0.1% have been much more modest. It is fairly easy to understand why the shocks of the Great Depression, the New Deal policies which increased dramatically the burden of estate and income taxation for the wealthy, and World War II, could have had such a dramatic impact on wealth concentration. However, top wealth shares did not recover in the following decades, a period of rapid growth and great economic prosperity. In the early 1980s, top wealth shares have increased, and this increase has also been very concentrated. However, this increase is small relative to the losses from the first part of the twentieth century and the top wealth shares increased only to the levels prevailing prior to the recessions of the 1970s. Furthermore, this increase took place in the early 1980s and top shares were stable during the 1990s. This evidence is consistent with the dramatic decline in top

[3]For the period 1916-1945, because of very high estate tax exemption levels, the largest group we can consider is the top 1%.

[4]Smith (1984) provides estimates for some years between 1958 and 1976 but his series are not fully consistent with Lampman (1962). Wolff (1994) has patched series from those authors and non-estate data sources to produce long-term series. We explain in detail in Section 5.3 why such a patching methodology can produce misleading results.

capital incomes documented in Piketty and Saez (2003) using income tax return data. As they do, we tentatively suggest (but do not prove) that steep progressive income and estate taxation, by reducing the rate of wealth accumulation of the rich, may have been the most important factor preventing large fortunes to be reconstituted after the shocks of the 1929-1945 period.

Perhaps surprisingly, our top wealth shares series do not increase during the 1990s, a time of the Internet revolution and the creation of dot-com fortunes, extra-ordinary stock price growth, and of great increase in income concentration (Piketty and Saez, 2003). Our results are nevertheless consistent with findings from the Survey of Consumer Finances (Kennickell, 2003; Scholz, 2003) which also indicate hardly any growth in wealth concentration since 1995. This absence of growth in top wealth shares in the 1990s is not necessarily inconsistent with the income shares results from Piketty and Saez (2003) because the dramatic growth in top income shares since the 1980s has been primarily due to a surge in top labor incomes, with little growth of top capital incomes. This may suggest that the new high income earners have not had time yet to accumulate substantial fortunes, either because the pay surge at the top is too recent a phenomenon, or because their savings rates are very low. We show that, as a possible consequence of democratization of stock ownership in America, the top 1% individuals do not hold today a significantly larger fraction of their wealth in the form of stocks than the average person in the U.S. economy, explaining in part why the bull stock market of the late 1990s has not benefited disproportionately the rich.[5]

Although there is substantial circumstantial evidence that we find persuasive, we cannot prove that progressive taxation and stock market democratization had the decisive role we attribute to them. In our view, the primary contribution of this paper is to provide new and homogeneous series on wealth concentration using the very rich estate tax statistics. We are aware that the assumptions needed to obtain unbiased estimates using the estate multiplier method may not be met and, drawing on previous studies, we try to discuss as carefully as possible how potential sources of bias, such as estate tax evasion and tax avoidance, can affect our estimates. Much work is still needed to compare systematically the estate tax estimates

[5]We also examine carefully the evidence from the Forbes 400 richest Americans survey. This evidence shows sizeable gains but those gains are concentrated among the top individuals in the list and the few years of the stock market "bubble" of the late 1990s, followed by a sharp decline from 2000 to 2002.

with other sources such as capital income from income tax returns, the Survey of Consumer Finances, and the Forbes 400 list.

The paper is organized as follows. Section 2 describes our data sources and outlines our estimation methods. Section 3 presents our estimation results. We present and analyze the trends in top wealth shares and the evolution of the composition of these top wealth holdings. Section 4 proposes explanations to account for the facts and relates the evolution of top wealth shares to the evolution of top income shares. Section 5 discusses potential sources of bias, and compares our wealth share results with previous estimates and estimates from other sources such as the Survey of Consumer Finances, and the Forbes richest 400 list. Finally, Section 6 offers a brief conclusion and compares the U.S. results with similar estimates recently constructed for the United Kingdom and for France. All series and complete technical details about our methodology are gathered in appendices of the paper.

2 Data, Methodology, and Macro-Series

In this section, we describe briefly the data we use and the broad steps of our estimation methodology. Readers interested in the complete details of our methods are referred to the extensive appendices at the end of the paper. Our estimates are from estate tax return data compiled by the Internal Revenue Service (IRS) since the beginning of the modern estate tax in the United States in 1916. In the 1980s, the Statistics of Income division of the IRS constructed electronic micro-files of *all* federal estate tax returns filed for individuals who died in the period 1916 to 1945. Stratified and large electronic micro-files are also available for 1965, 1969, 1972, 1976, and every year since 1982.[6] For a number of years between 1945 and 1965 (when no micro-files are available), the IRS published detailed tabulations of estate tax returns (U.S. Treasury Department, Internal Revenue Service, various years).[7] This paper uses both the micro-files and the published tabulated data to construct top wealth shares and composition series for as many years as possible.

In the United States, because of large exemption levels, only a small fraction of decedents has been required to file estate tax returns. Therefore, by necessity, we must restrict our analysis

[6] Those data are stratified and hence always contain 100% of the very large estates.

[7] Those tabulations are also based on stratified samples with 100% coverage at the top.

to the top 2% of the wealth distribution. Before 1946, we can analyze only the top 1%. As the analysis will show, the top 1%, although a small fraction of the total population, holds a substantial fraction of total wealth. Further, there is substantial heterogeneity between the bottom of the top 1% and the very top groups within the top 1%. Therefore, we also analyze in detail smaller groups within the top 1%: the top .5%, top .25%, the top .1%, the top .05%, and the top .01%. We also analyze the intermediate groups: top 1-.5% denotes the bottom half of the top 1%, top .5-.25% denoted the bottom half of the top .5%, etc. Estates represent wealth at the individual level and not the family or household level. Therefore, it is very important to note that our top wealth shares are based on individuals and not families. We come back to this issue later. Each of our top groups is defined relative to the total number of adult individuals (aged 20 and above) in the U.S. population, estimated from census data. Column (1) of Table A reports the number of adult individuals in the United States from 1916 to 2002. The adult population has more than tripled from about 60 million in 1916 to over 200 million in 2000. In 2000, there were 201.9 million adults and thus the top 1% is defined as the top 2.019 million wealth holders, etc.

We adopt the well-known estate multiplier method to estimate the top wealth shares for the living population from estate data. The method consists in inflating each estate observation by a multiplier equal to the inverse probability of death.[8] The probability of death is estimated from mortality tables by age and gender for each year for the U.S. population multiplied by a social differential mortality factor to reflect the fact that the wealthy (those who file estate tax returns) have lower mortality rates than average. The social differential mortality rates are based on the Brown et al. (2002) differentials between college educated whites relative to the average population and are assumed constant over the whole period (see Appendix B for a detailed discussion and analysis of the validity of this assumption). The estate multiplier methodology will provide unbiased estimates of the wealth distribution if our multipliers are correct on average and if probability of death is independent of wealth within each age and gender group for estate tax return filers. This assumption might not be correct for three main reasons. First, extraordinary expenses such as medical expenses and loss of labor income may

[8]This method was first proposed in Great Britain almost a century ago by Mallet (1908). Atkinson and Harrison (1978) describe the method in detail.

occur and reduce wealth in the years preceding death. Second, even within the set of estate tax filers, it might be the case that the most able and successful individuals have lower mortality rates, or inversely that the stress associated with building a fortune, increases the mortality rate. Last and most importantly, for estate tax avoidance and other reasons, individuals may start to give away their wealth to relatives as they feel that their health deteriorates. We will later address each of these very important issues, and try to analyze whether those potential sources of bias might have changed overtime.

The wealth definition we use is equal to all assets (gross estate) less all liabilities (mortgages, and other debts) as they appear on estate tax returns. Assets are defined as the sum of tangible assets (real estate and consumer durables), fixed claim assets (cash, deposits, bonds, mortgages, etc.), corporate equities, equity in unincorporated businesses (farms, small businesses), and various miscellaneous assets. It is important to note that wealth reported on estate tax returns only includes the cash surrender value of pensions. Therefore, future pension wealth in the form of defined benefits plans, and annuitized wealth with no cash surrender value is excluded. Vested defined contributions accounts (and in particular 401(k) plans) are included in the wealth definition. Social Security wealth as well as all future labor income and human wealth is obviously not included in gross estate. Estate tax returns include the full payout of life insurance but we include only the cash value of life insurance (i.e., the value of life insurance when the person is living) in our estimates.

Therefore, we focus on a relatively narrow definition wealth, which includes only the marketable or accumulated wealth that remains upon the owner's death. This point is particularly important for owners of closely held businesses: in many instances, a large part of the value of their business reflects their personal human capital and future labor, which vanishes at their death. Both the narrow definition of wealth (on which we focus by necessity because of our estate data source), and broader wealth definitions including future human wealth are interesting and important to study. The narrow definition is more suited to examine problems of wealth accumulation and transmission, while the broader definition is more suited to study the distribution of welfare.[9]

[9]The analysis of income distribution captures both labor and capital income and is thus closer to an analysis of distribution of the broader wealth concept.

For the years for which no micro data is available, we use the tabulations by gross estate, age and gender and apply the estate multiplier method within each cell in order to obtain a distribution of gross wealth for the living. We then use a simple Pareto interpolation technique and the composition tables to estimate the thresholds and average wealth levels for each of our top groups.[10] For illustration purposes, Table 1 displays the thresholds, the average wealth level in each group, along with the number of individuals in each group all for 2000, the latest year available.

We then estimate shares of wealth by dividing the wealth amounts accruing to each group by total net-worth of the household sector in the United States. The total net-worth denominator has been estimated from the Flow of Funds Accounts for the post-war period and from Goldsmith et al. (1956) and Wolff (1989) for the earlier period.[11] The total net-worth denominator includes all assets less liabilities corresponding to the items reported on estate tax returns so that the definitions of wealth in the numerator and the denominator are as close as possible. Thus, our denominator only includes defined contribution pension reserves, and excludes defined benefits pension reserves. Life insurance reserves, which reflect the cash surrender value of all policies held are included in our denominator. The total wealth and average wealth (per adult) series are reported in real 2000 dollars in Columns (3) and (4) of Table A. The CPI deflator used to convert current incomes to real incomes is reported in Column (10). The average real wealth series per adult along with the CPI deflator is plotted in Figure 1. Average real wealth per adult has increased by a factor of three from 1916 to 2000 but the growth was very uneven during the period. There was virtually no growth in average real wealth from 1916 to the onset of World War II. Average wealth then grew steadily from World War II to the late 1960s. Since then, wealth gross has been slower, except in the 1994-2000 period.[12]

After we have analyzed the top share data, we will also analyze the composition of wealth

[10] We also use Pareto interpolations to impute values at the bottom of 1% or 2% of the wealth distribution for years where the coverage of our micro data is not broad enough.

[11] Unfortunately, no annual series exist before 1945. Therefore, we have built upon previous incomplete series to construct complete annual series for the 1916-1944 period.

[12] It is important to note that comparing real wealth over time is difficult because it requires to use a price index and there is substantial controversy about how to construct such an index and account properly for the introduction of new goods. That is why most of the paper focuses on top wealth shares which are independent of the price index.

and the age, gender, and marital status of top wealth holders, for all years where these data are available. We divide wealth into six categories: 1) real estate, 2) bonds (federal and local, corporate and foreign) 3) corporate stock, 4) deposits and saving accounts, cash, and notes, 5) other assets (including mainly equity in non-corporate businesses), 6) all debts and liabilities. In order to compare the composition of wealth in the top groups with the composition of total net-worth in the U.S. economy, we display in columns (5) to (9) of Table A, the fractions of real estate, fixed claim assets, corporate equity, unincorporated equity, and debts in total net worth of the household sector in the United States. We also present on Figure 1, the average real value of corporate equity and the average net worth excluding corporate equity. Those figures show that the sharp downturns and upturns in average net worth are primarily due to the dramatic changes in the stock market prices, and that the pattern of net worth excluding corporate equity has been much smoother.

3 The Evolution of Top Wealth Shares

3.1 Trends

The basic series of top wealth shares are presented in Table B1. Figure 2 displays the wealth share of the top 1% from 1916 to 2000. The top 1% held close to 40% of total wealth, up to the onset of the Great Depression. Between 1930 and 1932, the top 1% share fell by more than 10 percentage points, and continued to decline during the New Deal, World War II, and the late 1940s. By 1949, the top 1% share was around 22.5%. The top 1% share increased slightly to around 25% in the mid-1960s, and then fell to less than 20% in 1976 and 1982. The top 1% share increases significantly in the early 1980s (from 19% to 22%) and then stays remarkably stable around 21-22% in the 1990s. This evidence shows that the concentration of wealth ownership in the United States decreased dramatically over the century. This phenomenon is illustrated on Figure 3 which displays the average real wealth of those in the top 1% (left-hand-side scale) and those in the bottom 99% (right-hand-side scale). In 1916, the top 1% wealth holders were more than 60 times richer on average than the bottom 99%. The figure shows the sharp closing of the gap between the Great Depression and the post World War II years, as well as the subsequent parallel growth for the two groups (except for the 1970s). In 2000, the top 1% individuals are

about 25 times richer than the rest of the population.

Therefore, the evidence suggests that the twentieth century's decline in wealth concentration took place in a very specific and brief time interval, 1930-1949 which spans the Great Depression, the New Deal, and World War II. This suggests that the main factors influencing the concentration of wealth might be short-term events with long-lasting effects, rather than slow changes such as technological progress and economic development or demographic transitions.

In order to understand the overall pattern of top income shares, it is useful to decompose the top percentile into smaller groups. Figure 4 displays the wealth shares of the top 1-.5% (the bottom half of the top 1%), and the top .5-.1% (the next .4 percentile of the distribution). Figure 4 also displays the share of the second percentile (Top 2-1%) for the 1946-2000 period. The figure shows that those groups of high but not super-high wealth holders experienced much smaller movements than the top 1% as a whole. The top 1-.5% has fluctuated between 5 and 6% except for a short-lived dip during the Great Depression. The top .5-.1% has experienced a more substantial and long-lasting drop from 12 to 8% but this 4 percentage point drop constitutes a relatively small part of the 20 point loss of the top 1%. All three groups have been remarkably stable over the last 25 years.

Examination of the very top groups in Figure 5 (the top .1% in Panel A and the top .01% in Panel B) provides a striking contrast to Figure 4. The top .1% declined dramatically from more than 20% to less than 10% after World War II. For the top .01%, the fall was even more dramatic from 10% to 4%: those wealthiest individuals, a group of 20,000 persons in 2000, had on average 1000 times the average wealth in 1916, and have about 400 times the average wealth in 2000. It is interesting to note that, in contrast to the groups below the very top on Figure 4, the fall for the very top groups continued during World War II. Since the end of World War II, those top groups have remained fairly stable up to the late 1960s. They experienced an additional drop in the 1970s, and a very significant increase in the early 1980s: from 1982 to 1985, the top .01% increased from 2.5% to 4%, a 60% increase. However, as all other groups, those top groups remained stable in the 1990s. Therefore, the evidence shows that the dramatic movements of the top 1% share are primarily due to changes taking place within the upper fractiles of the top 1%. The higher the group, the larger the decline. It is thus important to analyze separately each of the groups within the top 1% in order to understand the difference in the patterns.

Popular accounts (see Section 5.3 below) suggest that the computer technology in the recent decades has created many new rich individuals. Those newly rich individuals are likely to be much younger than the older rich. However, even if the new rich are younger and hence less likely to die than the old rich, our estimates based on estate tax data should not be biased downward. This is because the estate multiplier method corrects for changes in the age distribution of top wealth holders. Our estimates should, however, become noisier (as the sampling probability by death is reduced). This phenomenon should generate noisier series in the recent period but with no systematic bias as long as our multipliers correctly reflect the inverse probability of death of the wealthy in each age-gender cell.[13] However, the series displayed on Figures 2, 4, and 5 are very smooth in the 1990s, suggesting that the groups we consider are large enough so that sampling variability is small.[14]

3.2 Composition

Figure 6 displays the composition of wealth within the top 1% for 1929, a year when top wealth shares and stock prices were very high. Wealth is divided into four components: real estate, corporate stock (including both publicly traded and closely held stock), fixed claims assets (all bonds, cash and deposits, notes, etc.), and other assets (including primarily non-corporate business assets).[15] Figure 6 shows that the share of corporate stock is increasing with wealth while the share of real estate is decreasing with wealth, the share of fixed claims assets being slightly decreasing (the share of bonds is slightly increasing and the share of cash and deposits slightly decreasing). In the bottom of the top 0.5%, each of those three component represents about one third of total wealth. At the very top, stocks represent almost two thirds of total wealth while real estate constitutes less than 10%. This broad pattern is evident for all the years of the 1916-2000 period for which we have data:[16] the share of stocks increases with wealth and the share of real estate decreases. The levels, however, may vary over time due mainly to the sharp movements in the stock market.

[13] If fewer than expected of these young wealthy individuals die, the estimate is downward biased but if more than expected die, the estimate is upward biased.

[14] The estimates are independent across years as every person dies only once.

[15] Debts have been excluded from the figure but they are reported in Table B3.

[16] All these statistics are reported in Table B3.

Figure 7 displays the fraction of corporate stock in net worth over the period 1916-2000 for the top .5%, and for total net worth in the U.S. economy (from Tables B3 and A respectively). Consistent with Figure 6, the fraction of stock is much higher for the top .5% (around 50% on average) than for total net worth (around 20% on average). Both series are closely parallel from the 1920s to the mid 1980s: they peak just before the Great Depression, plunge during the depression, stay low during the New Deal, World War II, up to the early 1950s, and peak again in the mid-1960s before plummeting in the early 1980s.

This parallel pattern can explain why the share of wealth held by the top groups dropped so much during the Great Depression. Real corporate equity held by households fell by 70% from 1929 to 1933 (Figure 1) and the top groups hold a much greater fraction of their wealth in the form of corporate stock (Figure 7). Those two facts mechanically lead to a dramatic decrease in the share of wealth accruing to the top groups. The same phenomenon took place in the 1970s when stock prices plummeted and the shares of top groups declined substantially (the real price of corporate stock fell by 60% and the top 1% fell by about 20% from 1965 to 1982).

Corporate profits increased dramatically during World War II, but in order to finance the war, corporate tax rates increased sharply from about 10% before the war to over 50% during the war and they stayed at high levels after the war. This fiscal shock in the corporate sector reduced substantially the share of profits accruing to stock-holders and explains why average real corporate equity per adult increased by less than 4% from 1941 to 1949 while the average net worth increased by about 23% (see Figure 1). Thus, top wealth holders, owning mostly stock, lost relative to the average during the 1940s, and the top shares declined significantly.

The central puzzle to understand is why this explanation does not work in reverse after 1949, that is, why top wealth shares did not increase significantly from 1949 to 1965 and from 1986 to 2000 when the stock market prices soared, and the fraction of corporate equity in total net worth of the household sector increased from just around 12% (in 1949 and 1986) to almost 30% in 1965 and almost 40% in 2000?

The series on wealth composition of top groups might explain the absence of growth in top wealth shares during the 1986-2000 episode. The fraction of corporate stock in the top groups did not increase significantly during the period (as can be seen on Figure 7, it actually drops significantly up to 1990 and then recovers during the 1990s). Therefore, although the fraction of

corporate equity in total net worth triples (from 12% to 38%), the fraction of corporate equity held by the top groups is virtually the same in 1986 and 2000 (as displayed on Figure 7). Thus, the data imply that the share of all corporate stock from the household sector held by the top wealth holders fell sharply from 1986 to 2000. Several factors may explain those striking results. First, the development of defined contribution pensions plans, and in particular 401(k) plans, and mutual funds certainly increased the number of stock-holders in the American population,[17] and thus contributed to the democratization of stock ownership among American families. The Survey of Consumer Finances shows that the fraction of families holding publicly traded stock (directly or indirectly through mutual funds and pension plans) has increased significantly in the last two decades, and was just above 50% in 2001.[18]

Second, the wealthy may have re-balanced their portfolios as gains from the stock-market were accruing in the late 1980s and the 1990s, and thus reduced their holdings of equity relative to more modest families.

In any case, the data strikingly suggest that top wealth holders did not benefit disproportionately from the bull stock market relative to the average wealth holder.[19] This might explain in part why top wealth shares did not increase in that period when top income shares were dramatically increasing (see Section 5 below). By the year 2000, the fraction of wealth held in stock by the top 1% is just slightly above the fraction of wealth held in stock by the U.S. household sector (40% versus 38%). Therefore, in the current period, sharp movements of the stock market are no longer expected to produce sharp movements in top wealth shares as was the case in the past.[20]

[17]The Flow of Funds Accounts show that the fraction of corporate stock held indirectly through Defined Contribution plans and mutual funds doubled from 17% to 33% between 1986 and 2000.

[18]In 1989, only 31.7% of American households owned stock, either directly or indirectly though pension and mutual funds, while 48.9% and 51.9% did in 1998 and 2001 respectively. See Kennickell et al. (1997) and Aizcorbe et al. (2003).

[19]It is important to keep in mind that, because the wealth distribution is very skewed, the average wealth is much larger than median wealth. Obviously, the stock market surge of the 1990s did not benefit the bottom half of American families who do not hold any stock.

[20]It should be emphasized, though, that the wealthy may not hold the same stocks as the general population. In particular, the wealthy hold a disproportionate share of closely held stock, while the general population holds in general only publicly traded stocks through mutual and pension funds (see e.g. Kennickell, 2003). Estate tax returns statistics separate closely held from publicly traded stock only since 1986.

3.3 Age, Gender, and Marital Status

Figure 8 displays the average age and the percent female within the top .5% group since 1916.[21] The average age displays a remarkable stability over time fluctuating between 55 and 60. Since the early 1980s, the average age has declined very slightly from 60 to around 57. Thus, the evidence suggests that there have been no dramatic changes in the age composition of top wealth holders over time.[22] In contrast, the fraction of females among top wealth holders has almost doubled from around 25% in the early part of the century to around 45% in the 1990s. The increase started during the Great Depression and continued throughout the 1950s and 1960s, and has been fairly stable since the 1970s. Therefore, there has been substantial gender equalization in the holding of wealth over the century in the United States, and today, almost 50% of top wealth holders are female. It is striking, comparing Figure 2 and Figure 8, to note the negative correlation between the top wealth shares and the fraction of women in the top wealth groups. This suggests that the gender equalization at the top might have contributed to the decline in top wealth shares measured at the individual level. It is conceivable that wealth concentration measured at the family level has not declined as much as wealth concentration measured at the individual level.[23]

Estate tax law regarding bequests to spouses has changed over time and this might have affected the gender composition at the top through behavioral responses to estate taxation. Before 1948, bequests to spouses were not deductible from taxable estates with an exception of couples located in the so-called community property states where each spouse owned half of all assets acquired during marriage. Starting in 1948, spousal bequests became deductible up to 50% of the net estate. In 1981, spousal bequests became fully deductible.[24] Those changes might have increased the amount of spousal bequests made by wealthy individuals and hence

[21] Series for all groups are reported in Table B4.

[22] Although, due to significant decreases in mortality over the course of the 20th century, top wealth holders nowadays have more years of potential lifespan ahead of them and are therefore younger relative to the average population than in the early part of the century.

[23] We come back to this point in Section 5.3 when we compare our estimates with wealth concentration measures at the family level obtained with the Survey of Consumer Finances for the recent period.

[24] Similarly, 50% and 100% of spousal gifts became deductible in 1948 and 1981 respectively. In 1976, the marital deduction was modified to allow for the greater of 50% of estate or $250,000 to be deductible.

potentially increased the fraction of women in the top wealth groups.[25] Two points should be noted.

First, Figure 8 shows that most of increase in female fraction in the top wealth groups happened before the changes in estate tax law regarding spousal bequests (in 1948 and 1981) implying that those tax law changes can explain at best a fraction of the trend. As we discuss below, estate tax rates at the top became very high in the 1930s.[26] As a result, in order to avoid "double estate taxation", wealthy husbands had an incentive to pass their wealth directly to the next generations instead of passing it to their widowed spouses. Such a phenomenon should have decreased the number of wealthy widows, which should have *reduced* the number of wealthy widows at the top. Splitting wealth between spouses using gifts before death was not a better tax strategy as it would have triggered substantial gift taxes (following the introduction of the gift tax in 1932) before the marital deduction (for estates and gifts) was introduced in 1948. The main reason why the number of women in the top groups increases so much during the Great Depression seems to be due to differences in wealth composition between genders. In the late 1920s, wealthy women held a smaller fraction of their wealth in the form of stock than wealthy men. As a result, wealthy men lost a larger fraction of their wealth following the stock market crash of 1929 than wealthy women, thereby contributing to the increase in the fraction of women at the top.

Second, even tax law induced changes in spousal bequests have a real impact on the distribution of wealth across gender lines, and thus should not necessarily be regarded as unimportant.

The marital status of top wealth holders has experienced relatively modest secular changes. For males, the fraction of married men has always been high (around 75%), the fraction widowed has declined slightly (from 10 to 5%) and the fraction single has increased (from 10 to 15%). For females, the fraction widowed is much higher, although it has declined over the period from about 40% to 30%. The fraction married has increased from about 40% to 50% for females and thus the fraction single has been stable around 10%. This reinforces our previous interpretation that the increase in the fraction female at the top of the wealth distribution has not been due solely to an increase in the number of wealthy widows following increased spousal bequests,

[25] See Kopczuk and Slemrod (2003) for a detailed discussion of this point.

[26] The top estate rate increased from 20 to 45 percent in 1932, and then to 60% in 1935, to 70% in 1936, and to 77% in 1941.

but might reflect increases in female empowerment in the family (fairer distribution of assets between spouses) and in the labor market (reduction of the income gender gap overtime).

4 Understanding the Patterns

4.1 Are the Results Consistent with Income Inequality Series?

One of the most striking and debated findings of the literature on inequality has been the sharp increase in income and wage inequality over the last 25 years in the United States (see Katz and Autor, 1999, for a recent survey). As evidenced from income tax returns, changes have been especially dramatic at the top end, with large gains accruing to the top income groups (Feenberg and Poterba, 1993, 2000; Piketty and Saez, 2003). For example, Piketty and Saez (2003) show that the top 1% income share doubled from 8% in the 1970s to over 16% in 2000.[27] How can we reconcile the dramatic surge in top income shares with the relative stability of top wealth shares estimated from estate tax data since the 1980s?

Figure 9 casts light on this issue. It displays the top .01% *income* share from Piketty and Saez (2003), along with the composition of these top incomes[28] into capital income (dividends, rents, interest income, but excluding capital gains), realized capital gains, business income, and wages and salaries. Up to the 1980s (and except during World War II), capital income and capital gains formed the vast majority of the top .01% incomes. Consistently with our top .01% wealth share series presented on Figure 5B, the top .01% income share was very high in the late 1920s, and dropped precipitously during the Great Depression and World War II, and remained low until the late 1970s. Thus both the income and the estate tax data suggests the top wealth holders were hit by the shocks of the Great Depression and World War II and that those shocks persisted a long time after the war.

Over the last two decades, as can be seen on Figure 9, the top .01% income share has indeed increased dramatically from 0.9% in 1980 to 3.6% in 2000. However, the important point to note is that this recent surge is primarily a wage income phenomenon and to a lesser extent

[27] See the series of Piketty and Saez (2003) updated to year 2000.

[28] This group represents the top 13,400 taxpayers in 2000, ranked by income excluding realized capital gains although capital gains are added back to compute income shares.

a business income phenomenon.[29] Figure 9 shows that capital income earned by the top .01% relative to total personal income is not higher in 2000 than it was in the 1970s (around 0.4%). Adding realized capital gains does not alter this broad picture: capital income including capital gains earned by the top .01% represents about 1% of total personal income in 2000 versus about 0.75% in the late 1960s, a modest increase relative to the quadrupling of the top .01% income share during the same period.

Therefore, the income tax data suggest that the dramatic increase in top incomes is a labor income phenomenon that has not translated yet into an increased concentration of capital income. Therefore, in the recent period as well, the income tax data paints a story that is consistent with our estate tax data findings of stability of the top wealth shares since the mid-1980s. The pattern of capital income including realized capital gains displayed on Figure 9 is strikingly parallel to the pattern of the top .01% wealth share of Figure 5B: a mild peak in the late 1960s, a decline during the bear stock market of the 1970s, a recovery in the early 1980s, and no growth from 1990 to 2000.

Three elements might explain why the surge in top wages since the 1970s did not lead to a significant increase in top wealth holdings. First, it takes time to accumulate a large fortune out of earnings.[30] The top .01% average income in the late 1990s is around 10 million dollars while the top .01% wealth holding is around 60 million dollars. Thus, even with substantial saving rates, it would take at least a decade to the average top .01% income earner starting with no fortune to become an average top .01% wealth holder. Second, it is possible that the savings rates of the recent "working rich" who now form the majority of top income earners, are substantially lower than the savings rates of the "coupon-clippers" of the early part of the century. Finally, certain groups of individuals report high incomes on their tax return only temporarily (e.g., executives who exercise stock-options irregularly, careers of sport or show-business stars usually last for just a few years). To the extent that such cases became more

[29] Gains from exercised stock options are reported as wage income on income tax returns. There is no doubt that the recent explosion in the use of stock options to compensate executives has contributed to the surge in top wage incomes in the United States.

[30] Even in recent years after the explosion of executive compensation, few of the richest Americans listed on the annual Forbes 400 survey are salaried executives. Most of them are still either family heirs or successful entrepreneurs (see Section 5.3.3 below).

prevalent in recent years (as seems possible based on popular accounts), the sharp increase in the concentration of annual incomes documented by Piketty and Saez (2003) may translate into a smaller increase in the concentration of lifetime incomes and accumulated wealth.

The very rough comparison between income and estate data that we have presented suggests that it would be interesting to try and estimate wealth concentration from income tax return data using the capitalization of income method. In spite of the existence of extremely detailed and consistent income tax return annual data in the United States since 1913, this method has very rarely been used, and the only existing studies have applied the method for isolated years.[31] The explanation for the lack of systematic studies is that the methodology faces serious challenges: income data provides information only on assets yielding reported income (for example, owner-occupied real estate or defined contribution pension plans could not be observed), and there is substantial and unobservable heterogeneity in the returns of many assets, especially corporate stock (for example, some corporations rarely pay dividends and capital gains are only observed when realized on income tax returns).[32] More recently, Kennickell (2001a,b) has analyzed in detail the link between income and wealth in order to calibrate sample weights for the Survey of Consumer Finances. His analysis shows that the relation between capital income reported on tax returns and wealth from the survey is extremely noisy at the individual level. Nevertheless, it would certainly be interesting to use income tax return data to provide a tighter comparison with our wealth concentration results from estates. We leave this important and ambitious project for future research.

4.2 Possible Explanations for the Decline in Top Wealth Shares

We have described in the previous section the dramatic fall in the top wealth shares (concentrated within the very top groups) that has taken place from the onset of the Great Depression to the late 1940s. Our previous analysis has shown that stock market effects might explain the sharp drop in top wealth shares during the 1930s but cannot explain the absence of recovery in top

[31] King (1927) and Stewart (1939) used this method for years 1921 and 1922-1936 respectively. More recently, Greenwood (1983) has constructed wealth distributions for 1973 using simultaneously income tax return data and other sources.

[32] See Atkinson and Harrison (1978) for a detailed comparison of the income capitalization and the estate multiplier methods for the United Kingdom.

wealth shares in the 1950s and 1960s once stock prices recovered by the end of the 1960s. At that time, the wealth composition in top groups was again very similar to what it had been in the late 1920s, and yet top wealth shares hardly recovered in the 1950s and 1960s and were still much lower in the 1960s than before the Great Depression. There are several possible elements that might explain the absence of recovery of top wealth shares.

The first and perhaps most obvious factor is the creation and the development of the progressive income and estate tax. The very large fortunes (such as the top .01%) observed at the beginning of the 20th century were accumulated during the 19th century, at a time where progressive taxes hardly existed and capitalists could dispose of almost 100% of their income to consume, accumulate, and transmit wealth across generations. The conditions faced by 20th century fortunes after the shock of the Great Depression were substantially different. Starting in 1933 with the new Roosevelt administration, and continuously until the Reagan administrations of 1980s, top tax rates on both income and estates have been set at very high levels.

These very high marginal rates applied only to a very small fraction of taxpayers and estates, but the point is that they were to a large extent designed to hit incomes and estates of the top 0.1% and 0.01% of the distribution. In the presence of progressive capital income taxation, individuals with large wealth levels need to increase their savings rates out of after tax income much more than lower wealth holders to maintain their relative wealth position. Moreover, reduced after-tax rate of return might have affected savings rates of high wealth holders through standard incentive effects. In the presence of high income and estate taxes, wealthy individuals also have incentives to give more to charities during their lifetime further reducing top wealth shares.[33]

Second, starting with Sherman and Clayton Acts enacted in 1890 and 1914 respectively, the U.S. federal government has taken important steps to limit monopoly power using antitrust regulation. However, the degree of enforcement remained weak until the New Deal (see e.g., Thorelli, 1955). By curbing the power of monopolies, it is conceivable that such legislation contributed to reduced wealth concentration at the very top. Perhaps more importantly, the Roosevelt administration also introduced legislation to sever the link between finance and man-

[33]Lampman (1962) also favored progressive taxation as one important factor explaining the reduction in top wealth shares in his seminal study (see below).

agement of corporations. The Depression's financial market reforms act broke the links between board membership, investment banking, and commercial banking. As a result, the model of great financiers-industrialists which had created the very large fortunes of the Robber Barons of the late nineteenth and early twentieth century was no longer a possibility after the 1930s. DeLong (2002) discusses those aspects in more detail and suggests that such regulations severely prevented the creation of new billionaires during the very prosperous post-World War II decades.

Finally, the post World War II decades were characterized by a large democratization of higher education. Following the G.I. bill, the number of college educated men increased very quickly after World War II.[34] This undoubtedly contributed to the emergence of a large middle and upper middle income class in America which was able to accumulate wealth and hence perhaps reduce the share of total wealth accruing to the groups in the top percentile.[35]

Although we cannot observe the counterfactual world without progressive taxation or antitrust regulations, we note that economic growth, in net worth and incomes, has been much stronger starting with World War II, than in the earlier period. Thus, the macro-economic evidence does not suggest that progressive taxation prevented the American capital stock from recovering from the shock of the Great Depression. This is consistent with Piketty (2003), who shows that, in the purest neo-classical model without any uncertainty, a capital income tax affecting only the rich does not affect negatively the capital stock in the long-run. If credit constraints due to asymmetric information are present in the business sector of the economy, it is even conceivable that redistribution of wealth from large and passive wealth holders to entrepreneurs with little capital can actually improve economic performance (see e.g., Aghion and Bolton, 2003, for such a theoretical analysis). Gordon (1998) argues that high personal income tax rates can result in a tax advantage to entrepreneurial activity, thereby leading to economic growth. A more thorough investigation of the effects of income and estate taxation on the concentration of wealth is left for future work.

[34]The number of Bachelor's degrees awarded relative to the size of the 23 year old cohort tripled from about 5% in the 1920s to over 15% after World War II (see U.S. Bureau of the Census (1975), series H 755).

[35]For example, home ownership increased from 41% in 1920 to 62% in 1960 (see U.S. Bureau of the Census, 1975, series N 243).

5 Are Estimates from Estates Reliable?

In this section, we explore the issue of the reliability of our estimates. Our top wealth share estimates depend crucially on the validity of the estate multiplier method that we use. Thus we first discuss the potential sources of bias and how they can affect the results we have described. Second, we compare our results with previous findings using estate data as well as other data sources such as the Survey of Consumer Finances (SCF), and the Forbes 400 Wealthiest Americans. We focus on whether biases introduced by the estate multiplier methodology can affect our two central results: the dramatic drop in top shares since 1929 and the absence of increase in top shares since the mid-1980s.

5.1 Potential Sources of Bias

The most obvious source of bias would be estate tax evasion. Three studies of evasion, Harris (1949), McCubbin (1994), and Eller et al. (2001), have used results from Internal Revenue Service audits of estate tax returns for years 1940-41, 1982, and 1992 (respectively). Harris (1949) reports under-reporting of net worth of about 10% on average with no definite variation by size of estate, while McCubbin (1994) and Eller et al. (2001) report smaller evasion of about 2-4% for audited returns.[36] Those numbers are small relative to the size of the changes we have presented. Thus, it sounds unlikely that direct tax evasion can have any substantial effects on the trends we have documented and can certainly not explain the dramatic drop in top wealth shares. It seems also quite unlikely that evasion could have hidden a substantial growth in top wealth shares in the recent period. From 1982 to 2000 in particular, the estate tax law has changed very little and hence the extent of under-reporting should have remained stable over time as well. A closely related problem is undervaluation of assets reported on estate tax returns. We describe the issue of undervaluation in detail in appendix C, and we conclude that those adjustments appear to be too small to produce a significant effect on estimated top wealth shares.

As we have discussed briefly in Section 2, the estate multiplier method requires precise assumptions in order to generate unbiased estimates of the wealth distribution for the living.

[36] Those studies underestimate estate tax evasion to the extent that audits fail to uncover all the evaded wealth.

We use the same multiplier within age, gender, and year cells for all estate tax filers, independent of wealth. We apply the same social differential mortality rates for all years based on the Brown et al. (2002) differential between college educated whites relative to the average population. This is not fully satisfactory for two reasons. First, wealthy individuals (those who file estate tax returns upon death) may not have exactly the same mortality rate as college educated whites from Brown et al. (2002). The bias introduced, however, may be small, because the social mortality gradient is steeper at the lower end of the wealth distribution than at the high end. Second, we use the same social differential rates for the full 1916-2000 period although those rates might have changed over time. In appendix B we analyze in detail life insurance and annuities data compiled by the Society of Actuaries. Perhaps surprisingly, the data does not point to a significant narrowing over time between mortality rates of the general population and life insurance policy holders. Therefore, our assumption of constant social mortality differential rates might be acceptable.

Assuming that our multipliers are right on average, the key additional assumption required to obtain unbiased wealth shares is that, within age and gender cells and for estate tax filers, mortality is not correlated with wealth. A negative correlation would generate a downward bias in top wealth shares as our multiplier would be too low for the richest decedents. For example, if those with very large estates are less likely to die than those with moderately large estates, then the estate multiplier will underestimate the very wealthy relative to the moderately wealthy.

There are two direct reasons why such a negative correlation might arise. First, extraordinary expenses such as medical expenses and loss of labor income or of the ability to manage assets efficiently may occur and reduce wealth in the years preceding death, producing a negative correlation between death probability and wealth. Smith (1999) argues that out-of-pocket health expenses are moderate and therefore are not a major factor driving the correlation of wealth and mortality. However, his evidence is based on expenditures for the general population and it is the end-of-life health expenditures that are most significant. It seems unlikely, though, that health-related expenses create a significant dent in the fortunes of the super-rich but we were unable to assess the importance of lost earnings due to health deterioration at the end of life.[37]

[37]For some years, our data set contains information about the length of terminal illness. A simple regression of net worth on the dummy variable indicating a prolonged illness and demographic controls produced a significant

Second, even within the small group of estate tax filers, the top 1 or 2% wealth holders, it might be the case that the most able and successful individuals, of a given age and gender, have lower mortality rates. Although we cannot measure with any precision the quantitative bias introduced by those effects, there is no reason to believe that such biases could have changed dramatically over the period we study. In particular, they cannot have evolved so quickly in the recent period so as to mask a significant increase in top wealth shares and, for the same reason, they are unlikely to explain the sharp decrease in top wealth shares following the onset of the Great Depression.

More importantly, however, for estate tax avoidance and other reasons, individuals may start to give away their wealth to relatives and heirs as they feel that their health deteriorates. Indeed, all estate tax planners recommend giving away wealth before death as the best strategy to reduce transfer tax liability. Gifts, however, create a downward bias only to the extent that they are made by individuals with higher mortality probability within their age and gender cell. If gifts are unrelated to mortality within age and gender cells, then they certainly affect the wealth distribution of the living but the estate multiplier will take into account this effect without bias. Three important reasons suggest that gifts may not bias our results. First and since the beginning of the estate tax, gifts made in contemplation of death (within 2-3 years of death, see appendix C for details) must be included in gross estate and thus are not considered as having been given in our wealth estimates. We expect that a large fraction of gifts correlated with mortality falls into this category. Second, a well known advice of estate tax planners is to start giving as early as possible. Thus, those most interested in tax avoidance will start giving much before contemplation of death; in that case gifts and mortality have no reason to be correlated.[38] Last, since 1976, the estate and gift tax have been unified and the published IRS tabulations show that taxable gifts (all gifts above the annual exemption of $10,000 per donee) represents only about 2-3% of gross estate, even at the top. Thus, lifetime gifts do not seem to be large enough to produce a significant bias in our estimates for the recent period.

A more subtle possibility of bias comes from a related tax avoidance practice which consists in giving assets to heirs without relinquishing control of those assets. This is mostly realized

negative coefficient, suggesting that this effect may play a role.

[38] Gifts will have a real impact on the individual distribution of wealth although it might not change the dynastic distribution of resources.

through trusts whose remainder is given to the heir but whose income stream is in full control of the creator while he is alive. Like an annuity, the value of such a trust for the creator disappears at death and thus does not appear on estate tax returns. This type of device falls in between the category of tax avoidance through gifts and under-valuation of the assets effectively transferred. The popular literature (see e.g., Cooper, 1979 or Zabel, 1995) has suggested that many such devices can be used to effectively avoid the estate tax but careful interviews of practitioners (Schmalbeck, 2001) suggest that this is a clear exaggeration and that reducing significantly the estate tax payments requires actually giving away (either to charities or heirs) a substantial fraction of wealth. Again, such a source of reduction in wealth holdings reflects a real de-concentration of individual wealth (though not necessarily welfare).

The key question we need to address is whether the wealthy derive substantial annuity income from trusts which the estate multiplier method fails to capture because it disappears at death. There are two indirect sources of data to cast light on the importance of trusts. First, trusts are required to file income tax returns and pay annual income taxes on the income generated by the assets in the trust which is not distributed to beneficiaries.[39] Second, income from trusts distributed to individuals has to be reported on those individuals' income tax returns. Therefore, statistics on individual and trust income tax returns published regularly by the IRS (U.S. Treasury Department, Internal Revenue Service, various years) can be used to assess the total value of income generated and distributed by trusts. The total income distributed by trusts to individuals can then be capitalized to get an approximation of total individual wealth in the form of trusts. This total wealth should be an upper bound of the annuitized trust wealth that the estate multiplier method fails to capture. Using a 7.5% nominal rate of return on trust assets (trust income includes both ordinary income and realized capital gains), total wealth in trusts is only around 1.4% of our total wealth denominator in 1997, the last year for which statistics on trust income are available.[40] Thus, trust wealth is modest relative to the 21% share of total wealth going to the top 1% or even relative to the 9% share going to the top 0.1% in

[39]Beneficiaries could be individuals or charitable organizations. Trusts face the top individual income tax rate (above a very low exemption level) on undistributed income in order to prevent (untaxed) accumulation of wealth within trusts.

[40]In 1997, trusts distributed $26.3 billion to beneficiaries (see Mikow (2000-01)), representing a total annuitized wealth of $350 billion, or 1.4% of the $2.5 trillion total personal wealth in 1997.

1997.[41]

Therefore, the popular view that the wealthy hold most of their wealth through trusts which escape estate taxation appears inconsistent with tax statistics. More importantly, estimated trust wealth has declined overtime from around 3.5% of total wealth in the 1936, to around 2% in 1965, to about 1.5% in 1997. Hence, including annuitized trust wealth to our estimates would not modify much our results and would likely reinforce our main finding of a secular decline of top wealth shares over the century.

5.2 Changes in Bias Over Time

It is important to emphasize that *real* responses to estate taxation, such as potential reductions in entrepreneurship incentives, savings, or increases in gifts to charities or relatives, do not bias our estimates in general because they do have real effects on the distribution of wealth. Only outright evasion or avoidance of the type we described in the previous section can bias our results; and those effects need to evolve over time in order to counteract the trends we have described. We would expect that changes in the levels of estate taxation would be the main element affecting avoidance or evasion incentives over time.

It is therefore important to consider the main changes in the level of estate taxation over the period (see Appendix C and Luckey, 1995, for further details). Since the beginning of the U.S. federal estate tax, the rate schedule was progressive and subject to an initial exemption. The 1916 marginal estate tax rates ranged from 0 to 10%. The top rate increased to 40% by 1924, a change that was repealed by the 1926 Act that reduced top rates to 20%. Starting in 1932, a sequence of tax schedule changes increased the top rates to 77% by 1942, subject to a $60,000 nominal exemption. The marginal tax rate schedule remained unchanged until 1976, resulting in a fairly continuous increase of the estate tax burden due to "bracket creep". Following the 1976 tax reform, the exemption was increased every year. The top marginal tax rates were reduced to 70% in 1977 and 55% by 1984. There were no major changes until 2001 (the nominal filing

[41] Income tax statistics show that about 75% of total trust income goes to top 1% income earners and about 40% goes to the top 0.1% income earners. Thus, it seems reasonable to think that about 40% of trust wealth, or about 0.6% of total individual wealth, is held by the top 0.1%, a small amount relative to the 9% share of wealth held by that group in 1997.

threshold stayed constant at $600,000 between 1988 and 1997). Figure 10 reports the average marginal tax rate in the top 0.1% group[42] and the statutory marginal tax rate applying to the largest estates[43] (left y-axis), along with the top 0.1% wealth share (right y-axis). It is evident from this picture that the burden of estate taxation increased significantly over time. Somewhat surprisingly, the most significant increases in the marginal estate tax burden were brought about by holding brackets constant in nominal terms rather than by tax schedule changes.

There are very few attempts to measure the response of wealth to estate taxation.[44] Kopczuk and Slemrod (2001) used the same micro-data that we do to estimate the impact of the marginal estate tax rates on reported estates. They relied on both time-series variation and cross-sectional age variation that corresponds to having lived through different estate tax regimes. They found some evidence of an effect, with estate tax rates at age of 45 or 10 years before death more strongly correlated with estates than the actual realized marginal tax rates. Because the source of their data are tax returns, they were unable to distinguish between tax avoidance and the real response. Holtz-Eakin and Marples (2001) relied on the cross-sectional variation in state estate and inheritance taxes to estimate the effect on wealth of the living. They found that estate taxation has a significant effect on wealth accumulation. It should be pointed out though that their data contained very few wealthy individuals. Taken at face value, both of these studies find very similar magnitudes of response (see the discussion in Holtz-Eakin and Marples, 2001) suggesting little role for outright tax evasion: the Holtz-Eakin and Marples (2001) data is not skewed by tax evasion and avoidance while the effect estimated by Kopczuk and Slemrod (2001) reflects such potential responses. This would imply that trends in concentration due to tax evasion and avoidance are not a major issue.

Regardless of these findings, given that between 1982 and 2000 the estate tax system has changed very little, we would expect that the extent of tax avoidance and evasion has also

[42]These tax rates are computed by first evaluating the marginal tax rates at the mean net worth in Top .01%, .05-.01% and .1-.05% and then weighting the results by net worth in each category. These are "first-dollar" marginal tax rates that do not take into account deductions but just the initial exemption.

[43]After 1987, there is an interval of a 5% surtax intended to phase out the initial exemption in which the marginal tax rate (60%) exceeds the marginal tax rate at the top (55%).

[44]There is a larger literature that concentrates on gifts. See for example, McGarry (1999); Bernheim et al. (2001); Poterba (2001); Joulfaian (2003).

remained fairly stable. Therefore, the absence of increase in top shares since in the 1990s is probably not due to a sudden increase in estate tax evasion or avoidance.[45]

5.3 Comparison with Previous Studies and Other Sources

Another important way to check the validity of our estimates from estates is to compare them to findings from other sources. We have presented a brief comparison above with findings from income tax returns. After reviewing previous estate tax studies, we turn to comparisons with wealth concentration estimations using other data sources.

5.3.1 Previous Estate Studies

Lampman (1962) was the first to use in a comprehensive way the U.S. estate tax statistics published by the IRS to construct top wealth shares. He reported the top 1% wealth shares for the adult population for a number of years between 1922 and 1956.[46] His estimates are reproduced on Figure 11, along with our series for the top 1%.[47] Although the method, adjustments, and total net worth denominators are different (see appendix E), his estimates are generally similar to ours and in particular display the same downward trend after 1929.

Smith (1984) used estate tax data to produce additional estimates for the top 0.5% and top 1% wealth shares for some years in the 1958-1976 period. In contrast to Lampman (1962) and our series, the top 1% is defined relative to the full population (not only adults) and individuals are ranked by gross worth (instead of net worth).[48] We reproduce his top 1% wealth share, which looks broadly similar to our estimates and displays a downward trend which accelerates in the 1970s. No study has used post 1976 estate data to compute top wealth shares series for the recent period. A number of studies by the Statistics of Income Division of the IRS have estimated wealth distributions from estate tax data for various years but those studies only

[45] Of course, technological advances in estate tax avoidance remains a possibility, especially given that many changes relating to valuation issues are driven by judicial rather than legislative activity. It is striking to note, however, that the many books on estate tax avoidance published over time seem to always propose the same type of methods (see again Cooper, 1979 and Zabel, 1995).

[46] Lampman (1962) does not analyze smaller groups within the top 1% adults.

[47] Those statistics are also reported in Table C1.

[48] See Smith and Franklin (1974) for an attempt to patch the Lampman series with estimates for 1958, 1962, 1965, and 1969.

produce distributions, and composition by brackets and do not try in general to estimate top shares.[49] An exception is Johnson and Schreiber (2002-03) who present graphically the top 1% and .5% wealth share for 1989, 1992, 1995, and 1998. Their estimates are very close to ours, and display very little variation over the period.

5.3.2 Survey of Consumer Finances

The Survey of Consumer Finances (SCF) is the only other data that can be used to estimate adequately top wealth shares in the United States, because it oversamples the wealthy and asks detailed questions about wealth ownership. However, the survey covers only years 1962, 1983, 1989, 1992, 1995, 1998, 2001 and cannot be used to reliably compute top shares for groups smaller than the top 0.5% because of small sample size.[50] It should also be noted that all the information in the SCF is at the family level and not the individual level. Top shares estimated at the individual level might be different from top shares estimated at the family level, and the difference depends on how wealth is distributed among spouses within families. Atkinson (2003) discusses this issue formally. He shows that for realistic parameters (on the Pareto distribution and the number of married individuals relative to singles), for a given top share estimated at the family level, the corresponding top share at the individual level will be about 20% higher if all the rich are unmarried or have spouses with no wealth and will be about 20% lower if all the rich are couples with wealth equally split between spouses. Thus, changes of wealth distribution *within* families, which leave unchanged family based wealth shares, can have relatively large effects on individually based wealth shares. However, the magnitude is not large enough to explain the dramatic decline of the very top shares over the century solely by equalization of wealth between spouses within families.[51]

[49] See Schwartz (1994) for year 1982, Schwartz and Johnson (1994) for year 1986 and Johnson and Schwartz (1994) for year 1989, Johnson (1997-98) for years 1992 and 1995, and Johnson and Schreiber (2002-03) for year 1998.

[50] The 1962 survey is called the Survey of Financial Characteristics of Consumers and is the predecessor of the modern Surveys of Consumer Finances.

[51] The negative correlation, however, between the pattern of the top 1% wealth share on Figure 2 and the fraction female in the top .5% on Figure 8 suggests that equalization of wealth between spouses might have played a role in reducing individually based wealth concentration.

Kennickell (2003) provides detailed shares and composition results for the 1989-2001 period, and Scholz (2003) provides top share estimates for all the years available from the SCF. Kennickell and Scholz results are very close. We reproduce the top 1% wealth share from Scholz (2003) on Figure 11. The SCF produces estimates of top wealth shares larger than estimates from estates: the top 1% share from estates is between 20 and 25% while to the top 1% share from the SCF is slightly above 30%. We discuss below the reasons that have been put forward to explain this difference by various studies. However, the important point to note is that, as our estate estimates, the SCF does not display a significant increase in top wealth shares between 1962 and 2001. There is an increase from 1992 to 1995, but this increase has in large part disappeared by 2001. As a result, the top 1% shares from the SCF in 1983 and 2001 are almost identical.[52] In particular, it is striking to note that the top 1% share did not increase at all during the bull stock market in the second half of the 1990s. Therefore, two independent sources, the estate tax returns and the SCF, arguably the best data sources available to study wealth concentration in the United States, suggest that wealth concentration has not increased significantly since the mid-1980s, in spite of the surge in stock market prices.

A few studies have compared the estate tax data with the SCF data in order to check the validity of each dataset and potentially estimate the extent of tax avoidance. Scheuren and McCubbin (1994) and Johnson and Woodburn (1994) present such a comparison for years 1983 and 1989 respectively. They find a substantial gap in top shares estimates based on the two datasets, of similar magnitude than the one between our estimates and Scholz (2003) estimates.[53] As discussed above, an important source of discrepancy comes from the fact that the SCF is based on families while estate estimates are individually based. Johnson and Woodburn (1994) tries to correct for this and finds a reduced gap, although, in absence of good information on the distribution of wealth within rich families, the correction method might be very sensitive to assumptions (see below).

Scheuren and McCubbin (1994) describes other potential sources creating biases. In addition to the tax avoidance and under-valuation issues that we describe above, they show that SCF

[52] Kennickell (2003) reports standard errors of around 1.5 percentage points around the top 1% share estimates. Thus, the small movements in the SCF top 1% share might be due in large part to sampling variation.

[53] The statistics they report do not allow a precise comparison of the gap in the top 1% wealth share.

wealth might be higher than estate wealth because the value of closely held businesses might drop substantially when the owner-manager dies. Thus, the SCF wealth measure of businesses incorporates human wealth that is by definition excluded from estates. Therefore, the SCF and estates may not measure the same wealth concept even though both measures are interesting. The estate represents wealth that can be transferred while the SCF includes in part human wealth that is destroyed at death.

The composition data reported in Kennickell (2003) do not report total stock ownership separately. However, we can add together the categories of publicly traded stock directly held, mutual and other investment funds, and cashable pension funds. In 2001, both the top 1% wealthiest families and the average family held about 35% of their wealth in that form. This suggests, consistently with our composition results, that the development of retirement pension funds and mutual funds has contributed to the equalization of publicly held stock ownership in the United States. We note, however, that the SCF data for 2001 show that the top 1% hold a much larger fraction than the average (34% versus 19%) in the form of business assets (which include sole proprietorships, partnerships, as well as closely held corporations). Further systematic comparisons, asset by asset narrowly defined, of the SCF and estate tax returns would be very useful to understand better the quantitative importance of each of the sources of discrepancy we have mentioned.

More recently, Wolff (1996) uses the SCF 1992 data to estimate how much estate tax would be collected by applying average mortality rates to the SCF population. He finds that expected collections estimated from the SCF should be about 4 times larger than actual estate tax collections for those who died in 1992, suggesting massive tax evasion and avoidance. Poterba (2000), however, repeats Wolff study for 1995 and finds that estate taxes estimated from the SCF are just 10% higher than what was actually collected. Eller et al. (2001) tries to reconcile this discrepancy and shows that the results are quite sensitive to assumptions made about mortality rates, as well as marital and charitable bequests, but find a range of estimates much closer to Poterba than to Wolff. Our top wealth share estimates are about 25% lower than the SCF top wealth shares, suggesting that there might be some under-reporting of estates, but that the difference is actually much closer to the small gap found by Poterba (2000) than the very large gap found by Wolff (1996).

Finally, Wolff (1994) has produced series of top 1% wealth shares by pasting together the earlier estate series by Lampman (1962) and Smith (1984) and the modern SCF estimates.[54] These series represent the top 1% households (not individuals) and are reproduced on Figure 11. A close examination reveals that patching together data from difference sources is a perilous exercise. The Wolff series suggest that there has been a tremendous decline in wealth concentration in the 1960s and 1970s from 34% to 20%, followed by an equally large surge in concentration to above 35% in 1989. Our series based on an homogeneous estate tax data show that the evolution of concentration has actually been much less dramatic during that period. As can be seen from Figure 11, Wolff-Marley's estimate for 1976 is based on estate tax data while the 1962 and 1983 estimates are based on the SCF. Thus, the failure to account for the large gap between the SCF and estate estimates that exists in any given year generates a dramatic distortion in the time pattern of the Wolff-Marley series.

5.3.3 Forbes 400 Richest Americans

The popular view is that the personal computer revolution of the 1980s, and the development of Internet in the 1990s, created many new business opportunities and the extremely quick creation of new fortunes (the so called dot-comers). From this perspective, our finding of no increase in wealth concentration during the 1990s seems surprising indeed. To pursue this question further, we use the Forbes magazine annual survey of the top 400 richest Americans, available since 1982.[55] This systematic source has certainly been highly influential in creating the feeling that the last two decades had been extraordinary favorable to the creation of new fortunes.

The Forbes 400 represent an extremely small fraction of the U.S. adult population, about the top .0002% in 2000, that is, a group 50 times smaller than our top .01% group. We have used the Forbes 400 survey to estimate the top .0002% (corresponding almost exactly to the top 400 individuals in 2000) wealth share. This share is displayed on Figure 12.[56] It shows that the fraction of wealth controlled by the top fortunes tripled from just above 1% in the

[54] These series are a revised and extended version of the earlier Wolff-Marley series constructed in the same way and presented in Wolff and Marley (1989).

[55] Kennickell (2003) also examines the Forbes 400 data for the years corresponding to the SCF surveys between 1989 and 2001.

[56] Those statistics are also reported in Table C2.

early 1980s to above 3.5% at the peak in 2000. From 2000 to 2002, the share came down to just below 3% in 2002. Thus the Forbes data is indeed consistent with the popular view that the richest individuals in the United States control a sizeable share of total wealth and, more importantly, that this share has increased significantly over the last two decades. The top .01% share we estimated was around 4% since the mid-1980s. This is compatible with a top .0002% share slightly above 1% as in the early 1980s but not with a top .0002% share equal to 3.5% as in the peak of 2000.[57] Therefore, it appears that our top wealth share series from estates have failed to capture the increase due to the surge in the Forbes 400 top fortunes.[58]

For the early 1980s, McCubbin (1994) analyzed estate tax returns of Forbes 400 decedents and found that wealth reported on estate tax returns was on average 35% lower than on the Forbes list. The discrepancy was attributed mostly to the fact that the estate tax returns include only the assets and property owned by the individual decedent while the Forbes survey also includes wealth distributed to the spouse, and the full value of trusts set-up to distribute wealth to family relatives but whose creator retains control. It would be extremely useful to repeat this study for the full period 1982-2002 in order to understand the reasons for the growing discrepancy that has taken place since the mid-1980s between top estates and the Forbes 400.[59]

It is interesting to divide further the group of the Forbes 400 into the top 100 and the next 300 richest (for year 2000). Those top groups correspond to the top .00005% and top .0002-.00005% using our usual notation. The share of wealth accruing to those two groups is reported on Figure 12. It displays a striking contrast: the share of wealth of the top 100 have been multiplied by a factor 4.3 from 1983 to 2000 while the share of wealth of the next 300 richest individuals has only been multiplied by a factor 2.1 during the same period.[60] It is also

[57] More precisely, if wealth is Pareto distributed with parameter a, then the ratio of the top .01% wealth share to the top .0002% wealth share is $(.01/.0002)^{1-1/a} = 3.7$ for $a = 1.5$, which is about the Pareto parameter that can be obtained for the wealth distribution in 2000 from Table 1.

[58] If just a few billionaires are responsible for the surge, it is possible that they were simply not sampled (by death). Given that these types of fortunes accrued to relatively young individuals and that death probability (adjusted by the socioeconomic status) does not even reach 1% by the age of 60, it seems possible that a few-year long surge of wealth of a few individuals can remain unnoticed.

[59] It should also be noted that the Forbes 400 estimates are often educated guesses with potentially large errors. The Forbes 400 survey might also miss some wealthy individuals. The SCF survey does include a few individuals missed by Forbes with wealth above the Forbes 400 lower bound.

[60] The threshold corresponding to the bottom of the top 400 has actually increased "only" by 75% from 1983

important to note that the share of the two groups is closely parallel during the 1980s, a decade of relatively modest growth for the Forbes shares, and that the bulk of the divergence between the two Forbes groups, is concentrated in just 3 years, 1996 to 1999, which are the years of the fastest growth of the stock market (see Figure 1). It would be interesting to use the Forbes data to analyze to what extent the new technology stock market "bubble" can account for this phenomenon. In sum, three quarters of all the gains to the Forbes 400 from 1983 to 2000 have actually accrued to the top quarter of the list, and most of those gains happened in the second half of the 1990s. Therefore, taken at face value, the Forbes data, combined with the absence of a significant increase in top wealth shares in the estate tax data and the SCF, suggest that among the top fractiles of the wealth distribution, only the very top (perhaps a group limited to just the hundred richest individuals in the country) has experienced sizeable gains since the mid-1980s, while the other groups of high wealth holders actually did not experience much gains relative to the average wealth holder in the U.S. population.

The number of fortunes created by the development and expansion of new technology sector is certainly more than a few hundred. This fact can be consistent with our findings only if, at the same time those new fortunes were created, fortunes of similar magnitude were being destroyed. Analyzing in more detail the rise and fall of the new technology companies over the last two decades could be an interesting way to cast light on this issue, and understand why the results from estate tax returns or the SCF seem so much at odds with the popular perception of the 1990s decade and the Forbes 400 data.

Our top wealth shares series from estates show a sharp drop in very top wealth shares from 1916 to 2000; although the Forbes data suggest that our estimates have missed the surge in wealth of the very wealthiest richest Americans. How do the very richest Americans of today compare with the richest individuals from the beginning of the twentieth century? Forbes proposed a list in 1918 of the top 30 richest Americans. The richest person at the time was John Rockefeller, who held an estimated fortune of $1.2 billion (current dollars), and thus held 0.54% of total net worth. How does this compare with the wealth of the richest Americans in 2000, the very peak of the stock-market? As population has grown by a factor 3.33 from 1918 to 2000, to provide a meaningful comparison, we need to add the fortunes of Bill Gates,

to 2000.

Lawrence Ellison, Paul Allen, and one third of Warren Buffet, the four richest Americans in 2000. They total $166.33 billion, which is 0.52% of total net worth, almost exactly the same as John Rockefeller in 1918. Thus, even the peak of the stock market bubble did not produce top fortunes larger relative to the average than the one accumulated by John Rockefeller by 1918, and our top shares results suggest that there were many more wealthy individuals below him than today below Bill Gates.

6 Conclusion

This paper has presented new homogeneous series on top wealth shares from 1916 to 2000 using estate tax return data. Although many studies have analyzed wealth inequality in the United States, none had presented consistent concentration estimates over such a long period on an almost annual basis. We have found that the shocks of the Great Depression, the New Deal, and World War II, have produced a dramatic decrease in the top wealth shares. This decrease has been concentrated within the upper part of the top percentile, the top .1% of the wealth distribution, with much more modest changes for lower wealth groups within the top 1%. This evidence is consistent with the dramatic decline in top capital incomes documented in Piketty and Saez (2003). The large shocks that large wealth holders experienced in the first part of the century seem to have had a permanent effect: top wealth shares increased very modestly during the stock market booms of the 1960s and 1990s, and are much lower today than in the pre-Great Depression era. We have tentatively suggested that steep progressive income and estate taxation, by reducing the rate of wealth accumulation, may have been the most important factor preventing large fortunes from being reconstituted. Many other factors such as business and finance regulations, the emergence of a large middle class in the post World War II period, and the equalization of wealth across genders might have also contributed to reducing individual wealth concentration.

Surprisingly, our top wealth shares series do not increase during the 1990s, a time of extraordinary stock price growth and perceived as having been extremely favorable to the creation of new fortunes. Our results are consistent with findings from the Survey of Consumer Finances (Kennickell, 2003; Scholz, 2003) which also display hardly any significant growth in

wealth concentration since 1995. This absence of growth in top wealth shares are also consistent with the top income shares results from Piketty and Saez (2003) because the recent dramatic growth in top income shares has been primarily due to a surge in top labor incomes, with little growth of top capital incomes. Examination of the widely known Forbes 400 richest Americans survey shows a dramatic gain for those wealthy individuals but most of the gains are concentrated within the top 100 and in the few years of the stock market "bubble" of the late 1990s. Our composition series suggest that by 2000, the top 1% wealth holders do not hold a significantly larger fraction of their wealth in the form of stocks than the average person in the U.S. economy, explaining in part why the bull stock market of the late 1990s has not benefited disproportionately the rich.

To what extent is the U.S. experience representative of other developed countries' long run wealth concentration dynamics? Existing wealth concentration series are unfortunately very scarce and incomplete for most countries, and it is therefore very difficult to provide a fully satisfactory answer to this question. However, it is interesting to compare the U.S. top wealth series with comparable series constructed using the estate multiplier technique as well for the United Kingdom by Atkinson and Harrison (1978) and the Inland Revenue, and for France by Piketty et al. (2003). There are important similarities between the American, French, and British pattern of the top 1% wealth share displayed on Figure 13. In all three countries, top income shares fell considerably during the 1913 to 1950 period, and they were never able to come back to the very high levels observed in the early decades of the century. By the end of the century, the top 1% wealth shares are remarkably close around 22% is all three countries. It is plausible to think that in all three countries, top capital incomes have been hit by the depression and wars shocks of the first part of the century and could not recover because of the dynamic effects of progressive taxation on capital.

Some important differences among these countries should be mentioned. First, in the early decades of the twentieth century, top wealth shares were much higher in France, and especially the United Kingdom, than in the United States. Just before the Great Depression, the top 1% share is about 40% in the United States, 50% in France, and 60% in the United Kingdom. Thus, the dramatic fall of top wealth shares that we described for the United States pales in comparison to the French and British decline. Unsurprisingly, the decline in France is much steeper during

World War II, which destroyed a large fraction of the capital stock in the country. Second, in contrast to France and the United States where the top 1% wealth share has been relatively stable since the late 1940s, the top 1% wealth share continues to fall in the United Kingdom from over 45% in the 1950s to about 20% in the late 1970s.[61] Finally, the increase in the top 1% wealth share in the last decades in the United States and the United Kingdom has been of similar and modest magnitude (from less than 20% to 22-23%) but the timing has been different.[62] All of the gains occurred in the early 1980s in the United States, while all the gains happened in the late 1990s in the United Kingdom. A detailed analysis of the U.K. very top shares (such as the top .1%) and composition would be useful to understand whether this difference is driven from differences in concentration of stock ownership or in the tax systems in the two countries.

It is striking that, in both the United States and the United Kingdom, top wealth shares have increased so little in spite of a surge in top income shares. Atkinson (2002) shows that the top 1% income share increased from less than 5% in the late 1970s to over 10% in 1999 in the United Kingdom. The increase for the United States has been from less than 8% to about 16% during the same period (Piketty and Saez, 2003). Such a pattern might not last for very long because our proposed interpretation also suggests that the decline of progressive taxation observed since the early 1980s in the United States[63] and in the United Kingdom could very well spur a revival of high wealth concentration during the next few decades.

[61] Analyzing the evolution of top income and wealth taxation in the three countries more carefully could be useful to test whether taxation is the main factor driving top wealth shares.

[62] The French top wealth share does not seem to have increased at all since the early 1980s.

[63] Top income tax rates have gone down dramatically from 70% to 35% since 1981 and the U.S. estate tax is scheduled to be phased-out by 2011.

Appendix A The Estate Multiplier Method

The estate multiplier method relies on the assumption that decedents represent a random draw from the living population. Consequently, denoting the probability of dying by m_i, a single estate observation stands for $\frac{1}{m_i}$ observations, so that the observed estate of E_i stands for the wealth of $\frac{1}{m_i}E_i$. Our measure of E_i is described in Appendix C and our mortality measures are presented in Appendix B.

An implementation of the multiplier technique requires that wealth and mortality rates are appropriately measured. There are problems with both that we will discuss in what follows. It also requires the assumption of a random draw from the population. There are at least two reasons why this assumption is non-trivial.

First, individuals may de-cumulate wealth in anticipation of death, thereby making decedents a non-representative sample from the population. For example, some individuals who died had experienced a prolonged terminal illness. This is important because of accompanying expenses and the potential tax planning activities in anticipation of death. The effect may simply be due to higher out of pocket health expenses of the individuals who died compared to survivors. Smith (1999) argues that such expenses are moderate and therefore do not have major impact on wealth. However, his evidence is based on expenditures of the living, while there is some evidence that it is the end-of-life health expenditures that are most significant. Alternatively, when dealing with the tax data as we do here, there is also a possibility that observed estates are skewed by tax avoidance and therefore do not accurately reflect wealth of a typical individual.[64]

Second, to the extent that *a priori* mortality risk varies in the population and people have private information about their own frailty,[65] their wealth accumulation patterns might well be different. Alternatively, under one of the theories explaining the relationship of health and income or wealth, healthier people may simply be more productive and therefore wealthier. A correlation of the error between actual and assumed mortality rates with wealth will tend to bias the results even in the absence of any other measurement issues.

[64]This type of tax avoidance may be more prevalent among individuals who died compared to those who survived, because increased likelihood of death may motivate taxpayers to undertake planning. The importance of such an effect is mitigated by the fact that some avoidance strategies (such as gift giving) that are performed in anticipation of death are explicitly disallowed by the tax code. Note also that there is a qualitative difference between tax avoidance and real behavioral response to taxation in this context. To the extent that taxpayers truly adjust their behavior in response to taxation, it represents an economically meaningful impact on the wealth distribution. Tax avoidance that allows to reduce the size of taxable estate without effectively relinquishing control (see Wojciech Kopczuk and Joel Slemrod (2003) and especially the comment by Ray Madoff (2003) for a related discussion) will bias our results toward finding lower share of wealth at the top without a real effect. Such response is likely to vary with changes in the tax rates and therefore the bias might have changed over time. There is some evidence that the size of estates responds to tax incentives (Kopczuk and Slemrod, 2001; Holtz-Eakin and Marples, 2001). It is unclear whether the effect, if any, would be due to a real reduction in wealth or else due to tax avoidance. Some authors suggest that tax avoidance is rampant (Cooper, 1979), others disagree (Schmalbeck, 2001). Poterba (2001) and McGarry (1999) find that easy avoidance strategies that rely on gifts are not taken advantage of. On the other hand, Joulfaian (2003) finds using aggregate data that gift tax revenue is highly sensitive to expected marginal tax rates, while Poterba and Weisbenner (2003) find some evidence of the quantitative importance of an abusive use of minority discount provisions.

[65]Hurd et al. (1999) find that subjective survival probabilities predict mortality even when socio-economic characteristics and health conditions are controlled for.

Appendix B Population and Mortality

Mortality differential — its presence and its size One of the key issues in implementing the estate multiplier technique to estimate wealth shares of the wealthy is the choice of appropriate mortality rates. The ideal mortality tables would apply specifically to the wealthy and would be broken down by age and demographic characteristics. Our baseline mortality tables were obtained from the Human Mortality Database (www.mortality.org) and rely on the life tables constructed by the Office of the Actuary of the Social Security Administration (see Bell et al., 1992, for a full description of the methodology). The mortality tables by age and gender are available at annual frequency between 1900 and 1995. Between 1996 and 2000, we are using mortality projections available from the same source. These mortality tables are representative of the whole population.

It is well-known that health and mortality rates are negatively correlated with higher socioeconomic status measured by education, income (Deaton and Paxson, 1999, show that the effect is still present when education is controlled for), wealth (Attanasio and Hoynes, 2000) and wealth ranking (Attanasio and Emmerson, 2001). Deaton (2002, 2003) and Smith (1999) are recent surveys of the literature on this topic. In their pioneering study, Kitagawa and Hauser (1973) documented the importance of the socioeconomic differences in mortality rates in the United States using 1960 Census data, but there is also some evidence of differences by social classes that goes back much further (see Deaton, 2002, for references). The presence of such differences is also found in more recent data. The U.S. National Longitudinal Mortality Study was specifically designed to study socioeconomic differentials. The sample consists of 1.3 million (approximately half of that in the public release data) individuals primarily drawn from the 12 CPS studies between March 1973 and March 1985 and matched with the National Death Index between 1979 and 1985 to identify deaths (see Rogot et al., 1992, for the details of the design). Extensive tabulations in Rogot et al. (1992) document substantial mortality differentials by race, education and income categories. The study has its limitations: income is poorly measured and the sample does not include institutionalized individuals. Figure A1 is based on the tabulations in Rogot et al. (1992). It shows the ratio of mortality rates of white individuals with the highest family incomes to the population average. Income categories are defined in terms of 1980 dollars. The whites in $25,000 and over group constitute approximately 25% of the population while the whites in $50,000 and over groups constitute approximately 5%. There is considerable noise in the estimates for the top income category due to limited number of observations: for example, the category of 25 to 35 years old women with income above $50,000 includes a bit more than 3000 individuals but just 11 deaths. Nevertheless, the figure illustrates that mortality rates for the higher income categories are usually significantly below the population ones and that the gap gets smaller for the elderly.[66] Brown et al. (2002) use the NLMS data to estimate the size of socioeconomic differentials by education and gender. As discussed in what follows, we rely on their estimates in making adjustments to the mortality rates.

There is a considerable literature devoted to analyzing causal paths from income to health.[67] The direction of causality is not directly relevant for our study, although, to the extent that health affects wealth, it suggests that the bias discussed earlier may be relevant.

[66] Using AHEAD data, Hurd et al. (1999) also find that the mortality gap falls with age.

[67] See Deaton (2002) for a survey and discussion and Adams et al. (2003) for a recent study.

Mortality differential — changes over time The major data problem from our point of view is that no consistent mortality tables for the wealthy for the whole century are available. It is certainly possible that the magnitude of the mortality differential between wealthy and the rest changed over time. Duleep (1989) compared the mortality differentials in the 1970s by income and education classes based on the Social Security records to the results of Kitagawa and Hauser (1973) that were based on 1960 Census and found no significant changes. By its design, however, that study does not directly address the mortality experience of the wealthy (who are above the Social Security limit). Pappas et al. (1993) replicated the analysis of Kitagawa and Hauser (1973) using the 1986 National Mortality Follow-back Survey and the 1986 National Health Interview Survey and concluded that differentials increased between 1960 and 1986. Hattersley (1999) relies on the UK Longitudinal Study (a panel study) and reports changes in life expectancy and survival probabilities by social classes (based on the initial occupation) between 1972 and 1996. For both men and women, the results show proportionally bigger increases in the survival rates for professionals than for unskilled workers (who had lower survival rates to begin with). Converting her results to mortality rates, they indicate a significant widening of the mortality differential.[68]

We can shed some additional light on the mortality differential over time using insurance data. It is well-known that both annuitants and purchasers of life insurance are wealthier than the average. The Society of Actuaries made available on its web page (www.soa.org) a collection of more than 300 mortality tables for different countries and different periods, including some tables based on the experience of insurance companies. Unfortunately, variation in the definitions and approaches used in their construction makes them non-comparable and thus makes it difficult to credibly trace the evolution of the mortality differential over time. Furthermore, to the extent that penetration of the insurance markets varied over time, this induces an additional source of compositional changes. We present the numbers from the George B. Buck Consultants Inc. U.S. mortality tables that are based on the experience of employees of large industrial clients pension plans and are dated at 1963, 1974 and 1979. Additionally, the Buck table based on the experience of employees in State Teacher Retirement Systems is available for 1982. In each case, these mortality tables cover a few preceding years. Figure A2 compares these mortality rates to population averages in 1960, 1971, 1975 and 1978 — years that fall in the middle of the experience periods corresponding to the different tables.[69] All of these figures include as a reference the arithmetic average of the differential over the four series. One thing to note here is that the 1960 mortality differentials are smallest (the ratios are closest to one) and the 1978 values appear to indicate a bigger differential than the earlier years. As mentioned, however, the 1978 data is based on a different sample and therefore is likely not comparable to other series. The education gradient is known to be significant and, arguably, more important than the income one. The pattern of the earlier data is certainly consistent with mortality differential increasing over time but it is hardly conclusive.

Given difficulties involved in studying the size of the gradient in the second part of the 20$^{\text{th}}$

[68]For example, according to these results, the estimated probability of survival to at least age 65 for a 25-29 year old male professional changed from 72% to 84%, while the respective probabilities for a male unskilled worker changed from 61% to 64%. Taking these numbers at face value would suggest an large decrease in the ratio of mortality rates of the skilled to the unskilled from 72% to 45%.

[69]There is no information about the period covered by the 1963 study so that the value of 1960 was selected arbitrarily. The mortality rates are weighted by the sizes of policies.

century, it is hardly surprising that the task is even more daunting if one is concerned with the whole century. Scattered mortality tables based on annuity providers experience and relied upon in valuation of annuities are available for many different years and they underlie Figure A3. It has to be stressed that these tables have different sources and are not necessarily directly comparable.[70] No obvious trends in the evolution of mortality differentials are detectable.

Approach. We assume that the differential between mortality rates of the wealthy and those of the general population stayed constant over time. The evidence regarding changes in the size of this differential over time is very sketchy. It is somewhat reassuring that mortality tables based on the experience of pension plans do not contradict our assumption. Even under this simplifying assumption, we still need to measure the size of these constant differentials. We rely on estimates from Brown et al. (2002) kindly provided by the authors. Relying on the NLMS data, they estimated mortality differentials by educational status, sex and gender. We use in our work the mortality differential for white college graduates (by gender). It would be preferable from our point of view to use differentials by wealth or at least income classes. Such data is unfortunately not available. The NLMS has only a poor measure of income and, despite its large size (more than 1 million observations) the top income category is very thin. We modify the Brown et al. (2002) factors slightly: their mortality ratios exceed 1 for ages close to 100, in such cases we set them to equal 1 (and we set them to 1 for all higher ages).[71] Figure A4 displays the socioeconomic mortality differentials that we use for both men and women.

Mortality-related sources of a potential bias. The mortality adjustments that we rely on are crude. There are at least two issues that are of importance. First, the mortality rates may be systematically biased. It is certainly possible that our assumption of the mortality differential not changing over time is not correct, so that in any given year the mortality rates are in fact biased. One would expect that the bias from this source, if any, evolves slowly over time, so that short-term changes in wealth shares cannot be explained by it. Long-term biases remain, however, a possibility.

Second, our assumption that the mortality rates are constant within year×gender×age cluster may be in fact incorrect. The direction of the bias will depend on the sign of the covariance between the mortality error and its effect on wealth accumulation. In a given cluster, we estimate the average wealth as $\overline{\frac{1}{m}} \cdot \overline{W}$ where "bar" stands for the mean. If the mortality rates are in fact varying, the correct estimate should be $\overline{\frac{1}{T} \cdot W} = \overline{\frac{1}{m}} \cdot \overline{W} + \mathrm{cov}(\frac{1}{m}, W)$. Standard arguments would suggest that higher mortality rates lead to lower wealth due to higher health expenditures, increased tax avoidance and planning in contemplation of death, or lower productivity. If so, then the multiplier and wealth are positively correlated, so that the covariance effect tends to bias our wealth shares estimates downward.

[70] We selected tables that were subsequently relied upon in valuation of annuities. These are tables numbered 803, 806, 888, 809, 810 and 814 (in chronological order). In some cases, they involve some interpolations (especially for younger ages). The full methodology is not always fully explained.

[71] As Brown et al. (2002) point out, there must be a cross-over of mortality rates if groups have the same maximum age. Effectively then, our assumption implies that the maximum age for the two groups is different. There are naturally extremely few individuals of such advanced age, even among estate filers. Since mortality rates by the age of 100 are of the order of .4 even in the most recent data and because our age variables are truncated at 97, 98 or 99 (depending on the year), it is unlikely that this has any significant effect.

Appendix C An Overview of Estate Taxation and the Net Worth Measure

An excellent overview of the history of changes in the estate tax can be found in the CRS report by Luckey (1995). Gale and Slemrod (2001) discuss the economic literature on estate taxation. The modern estate tax was introduced in 1916. The original tax applied to net estates above $50,000 dollars with a top marginal rate of 10%. Between 1916 and 1945, there were 11 tax reforms changing marginal tax rates and/or exemptions. By the end of this period, the top marginal tax rate was 77% and the exemption was $60,000. Both the rate schedule and the nominal exemption remained unchanged until 1976. Major revisions of the gift and estate taxation were introduced by the Tax Reform Act of 1976 and the Economic Recovery Tax Act of 1981. A number of smaller changes throughout the 1980s and 1990s were followed by major increases in the exemption levels and the scheduled repeal (in 2010) of the tax enacted in 2001. In what follows, we briefly review the history of provisions that are of major importance to this paper.

Filing Threshold. The coverage of our data naturally depends on the filing threshold. The tax applies to net estate (gross estate minus deductions). Beginning with the Revenue Act of 1918 (effective February 24, 1919), a tax return had to be filed for all gross estates exceeding the exemption, regardless of whether net estate was above or below the threshold. Prior to that change, the return had to be filed if estate was subject to the tax or where gross estate at death exceeded $60,000 (while the exemption was $50,000). Subsequent changes in the nominal filing threshold were as follows: February 26, 1926 — $100,000, June 6, 1932 — $50,000, August 31, 1935 — $40,000, October 21, 1942 — $60,000. Between 1977 and 1988, the exemption changed every year (on January 1st) beginning with $120,667 and increasing to $600,000. It was further increased to $625,000 in 1998, $650,000 in 1999 and $675,000 in 2000. The location of this threshold determines what fraction of population our data represents.

Gross Estate. The 1916 definition of gross estate included all property, gifts made within two years of death and all assets held jointly excluding those that may be shown to have originally belonged to the other persons and never belonged to decedent. The Revenue Act of 1918 expanded the definition of estate to include dower, power of appointment, and life insurance. Many aspects of this definition evolved over time since. Major changes involved the treatment of jointly owned property, gifts, life insurance and relatively recent legislative and court activity regarding valuation of certain kinds of assets.

- Community property/jointly owned property/marital deduction.[72] There are nine community property states[73] where half of all assets acquired while married is the property of each spouse — such assets are called community property. Jointly held property is different from the legal point of view — this is anything jointly owned (not necessarily with the spouse) *except* for the community property. The original definition of a gross estate called for inclusion of all jointly owned property in the gross estate. As a consequence, residents

[72] We are grateful to Jon Bakija and Barry Johnson for their help in clarifying these issues.

[73] Arizona, California, Idaho, Louisiana, Nevada, New Mexico, Texas, and Washington. Wisconsin effectively became a community property state in 1986.

of the community property states were treated differently than others. A half of any community property was to be reported, while residents of other states had to report and were subject to the tax on the full value of jointly held assets. This situation was perceived as an important source of the (horizontal) inequity, and the 1942 Act attempted to address this issue by requiring that community property be included in the gross estate unless the surviving spouse could be shown to have contributed to the acquisition cost. This solution was replaced in 1948 by the marital deduction: up to 50% of estate of the first-to-die could be deducted from gross estate. In 1976, this rule was modified to allow for a deduction of the greater of 50% or $250,000, and in 1981 the unlimited marital deduction was allowed for. Until 1976, all of the joint property was included in gross estate.[74] After 1976, under some conditions, only 50% must be included.[75] After 1981, only 50% of joint property (without any restrictions) must be included.

From the point of view of maintaining a consistent definition of gross estate, the 1943-1948 period is different than the rest, because the definition of gross estate in community property states is broader than in other years. Our data do not provide a fully consistent definition over time and across states.[76] In Appendix D.5 we do though perform limited sensitivity checks by comparing individuals in the community property states to the others to see whether their relative shares between 1943-1948 appear unusual. We also discuss there the quantitative relevance of changes in the treatment of joint property.

- Life insurance (receivable either by the executor of the estate or by others under policies taken out by the decedent) was to be included in gross estate beginning with the Tax Reform Act of 1918. Before 1942, up to $40,000 of life insurance could be excluded from the estates. In 1954, rules governing taxation of life insurance were further extended to include policies that were given away by the decedent within three years of death or in contemplation of death. We can account for changes in the exemption, but not for the 1954 change in the definition.

  While we observe life insurance payouts, we have no further information regarding contracts that were their source. For example, we do not know whether the taxpayer held a term- or a whole-life policy. This data problem makes it impossible to ascertain the exact cash value of life insurance. Motivated by the composition of life insurance in the SCF data as reported in Brown (1999), we assume that the life insurance payout is split equally between term- and whole-life policies. We further assume that the whole-life part has the cash value of 2/3 of the face value, while the term-life part has the cash value equal to the expected payout (the mortality rate times the actual payout). We include the so defined cash value in our net worth measure but we order individuals based on net worth excluding life insurance. Figure A5 shows estimates of the top 1% wealth share when (1)

[74] Unless it could be shown that it have originally belonged to the other persons and never belonged to decedent.

[75] However, with unlimited marital deduction available, there is a counteracting incentive to report all unrealized capital gains as jointly owned property, in which case they are subject to a step-up in basis. The 1976 Act introduced a "carryover basis" for unrealized capital gains, however this provision never became effective and was repealed by the Crude Oil Windfall Profits Tax Act of 1980.

[76] We have no information about community property before 1976 and we have no information about jointly owned property in 1965 and 1969. We investigated adjusting the definition of gross estate to always include half of jointly owned property (imputing 1965 and 1969 values), but it had negligible quantitative consequences and still does not address the community property problem.

life insurance is excluded, (2) only cash surrender value is included (the baseline case) and (3) when the full payout is included. It is evident from these pictures that life insurance is small and that both quantitative and qualitative results are very robust to variations in its treatment. The importance of life insurance falls with wealth: for example, the cash surrender value of life insurance in the top .01% constituted at its peak (1943) just 1.56% of net worth and it was usually much lower than 1%.

- Gifts. The gift tax was introduced in 1924. There was a lifetime exclusion of $50,000 and an annual exclusion of $500 per donee. The gift tax, as well as the 1924 estate tax schedule were *retroactively* repealed in 1926. In 1932, the gift tax was reintroduced and the marginal gift tax rates were set at three-quarters of the estate tax rates and the annual exclusion was set at $5000. The next major modification of gift taxation was introduced in 1976 when the estate and gift taxation were "unified". The 1976 Act introduced the single unified exemption for combined gifts and estate transferred by the deceased. The marginal estate and gift tax rates are set nominally at the same level, However the estate tax liability is computed using a tax-inclusive basis while the gift tax liability is obtained on a tax-exclusive basis, resulting in a significant tax advantage of gifts.[77]

  We exclude regular lifetime gifts from our definition of net worth, consistently with our objective of computing the total wealth that is effectively controlled by the wealthy. The exception here are gifts in "contemplation of death" that were included in the estate since the introduction of the tax in 1916. Some of specific rules changed over time to address certain avoidance loopholes (e.g., the 1954 change in the treatment of life insurance that was discussed earlier). The gross estate is now supposed to include regular gifts made within 3 years of death[78] (the original limit was two years, increased to three in 1950), any transfers with retained life estate (i.e., if the decedent retained an interest), transfers taking effect at death, revocable transfers and transfers by the decedent with respect to a life insurance policy made within 3 years before death. To the extent that such gifts are indeed made in contemplation of death (as the tax law assumes), their inclusion potentially reduces the "moral hazard" bias discussed earlier by eliminating one source of the difference between decedents and survivors.

- Valuation. Many types of assets are inherently difficult to value. As discussed by e.g., Schmalbeck (2001) and Johnson et al. (2001), certain types of assets are routinely allowed by the courts to be valued at a discount. This applies in particular to the situations where the estate contains a significant fraction of a certain kind of property (e.g., corporate stock) so that its sale would likely result in a significant reduction in price (so called non-marketability discounts). Discounts are also granted to minority interests, even in the case when the family owns a majority stake in the company. Some difficult to sell assets (such as works of art) are also occasionally granted such a treatment. Our data does not allow for identifying the extent of such activity. Johnson et al. (2001) found that approximately 6% of returns claimed minority or lack-of-marketability discounts and that their average size was about 10% of gross estate (for those who claimed the discounts), suggesting that this does not have a large quantitative impact on the estimates. Poterba and Weisbenner

[77] On the other hand, gifts including any unrealized capital gains do not benefit from the step-up of their basis.
[78] Even those for which a gift tax return was filed

(2003) pursue this direction further. It is quite possible that the bias resulting from these kinds of discounts did not stay constant over time, because many of these approaches are relatively new.

Changes in the approach to valuation are often driven by court cases rather than legislative activity. Two provisions were, however, directly enacted by the legislature. Since 1976, the so-called "special-use" rules allowed estates consisting primarily of a closely held business or family farm to be significantly undervalued.[79] Because tax returns (and our data) contain both the information about the fair market value and the adjusted value of such assets, we are able to account for the full (i.e., fair market) value of these assets and, therefore, maintain the consistent definition of estate over time. The special-use adjustment is of minor quantitative importance.[80] Since 1935, the executor of an estate has had an option of using the so-called "alternate valuation", whereby assets can be valued one year after death instead of being valued at the time of death. The alternate valuation delay was later reduced to half a year. Our data contain both alternate and date-of-death valuations starting in 1962, but we only have the actual for-tax-purposes value between 1935-1945. As a result, we are unable to have a fully consistent date-of-death definition for our whole sample, but we can measure the size of the difference starting in 1962 and it is quantitatively small.

Deductions Many deductions for tax purposes from the gross estate are possible (charitable deductions since 1918, marital deduction since 1948, deductions for funeral and administrative expenses and so on). Although all of them have tax consequences, they are not relevant for the purpose of estimating wealth shares. We subtract from the estate only personal debts and mortgages of the decedents. In particular, funeral expenses, executor's commissions, attorneys' fees and other administrative expenses of the estate are not subtracted. Some of these debts (e.g., medical debts) may not be representative of debts of surviving individuals, our data does not allow however for any systematic and consistent over time accounting for different kinds of debts.

Definition of net worth. Net worth is defined as the total gross estate adjusted for the special use valuation provisions and reduced by debts.[81] Gross estates are measured at the value for tax purposes which is either date of death or the date of alternative valuation. This is due to lack of information on the date of death valuations between 1935 and 1945. After 1962, we can observe both date-of-death and alternate valuations. We discuss the magnitude of the difference between the two types of valuation below.

[79] Specifically, under certain circumstances, these kinds of assets can be valued at their present rather than best use.

[80] With the exception of 1983 tabulations in brackets below the top .25% that are based on a very small number of observations (see tables A2-A and B, and the further discussion of the estate composition data), in no other bracket the special use adjustment exceeds the order of 1% of our final figure assigned to net worth. In some of the thin brackets in 1983, this adjustment is approximately 4%. The special-use adjustment was originally capped at $500,000. The 2000 (the last year of our data) limit was $780,000. By definition then, this rule can only play a minor role at the very top.

[81] Individuals are ordered according to net worth minus the estimated value of life insurance. To the extent that inclusion of life insurance leads to rank reversal, the share of wealth held by the top percentiles is slightly underestimated (see sensitivity analysis described above).

Appendix D Top Wealth Shares

Appendix D.1 Aggregate Net Worth Series

In order to obtain a denominator for our top wealth shares computations, we need to obtain estimates of total net worth of the household sector in the United States. Net worth will be defined as the sum of all tangible assets (owner occupied residential land and housing[82] and consumer durables), financial assets (deposits, bonds, equity in corporate and non-corporate businesses, etc.), net of all liabilities (consumer debt, mortgages, etc.). Our wealth measure includes only the cash surrender value of pension fund reserves (that is, the value of pensions that remains upon death). Our wealth measure includes life insurance reserves (as we include the expected pay-out of life insurance in our estimates). It also excludes social security wealth, and all forms of human wealth (expected value of future labor earnings). Our wealth definition corresponds roughly to the definition of wealth W2 in Wolff and Marley (1989).

Unfortunately, the United States has not developed a consistent set of estimates of household wealth since 1916. As a result, aggregate net worth series have been computed using various sources.

Period 1945-2002

For the period since 1945, detailed official Flow of Funds Accounts (FFA) have been produced for each sector of the U.S. economy (see Board of Governors of the Federal Reserve System (2000)). The FFA presents the detailed balance sheets of Households and Nonprofit Organizations. They report the amounts outstanding (on December 31st of each year) broken down for a large number of assets and liability items. Net worth is divided into three broad categories: Tangible Assets, Financial Assets, and Liabilities. The main difficulty with the FFA is that they separate the household from the non-profit sector only imperfectly before 1988.

As only the Cash Surrender Value (CSV) of pensions enters estates, we include only the CSV of pension fund reserves in our total net worth series. According to Smith (1984) and Wolff (1989), the CSV of pensions has been traditionally very small in the United States (estimated around 5%). However, over the last three decades, the development of Defined Contribution (DC) pension plans, and in particular 401(k) plans since the 1980s, has substantially increased the CSV of pensions. In general, DC plans vest after a short period of employment (401(k) employee contributions vest immediately in general) with the same employer and are portable when an employee shifts to another employer; amounts accumulated in DC plans can be fully bequeathed at death and thus are fully included on estate tax returns). Therefore, we assume that all DC pension reserves have 100% CSV. The DC pension plans assets are obtained from the FFA, Table L119c (Row 1, total financial assets) since 1985. Before 1985, the FFA does not report the DC plans assets but report the equity shares held by households through DC plans (Table B100e, Row 13). We assume that the fraction of equity shares in DC plans before 1985 is equal to 40% (which is the fraction in 1985). Before 1955, DC plan assets is less than 5% of pension reserves. Therefore for the period before 1955, we adopt the Smith-Wolff assumption

[82]Tenant occupied residential land and buildings with more than four units are included in the business assets category in the Flow of Funds Accounts and we have followed their methodology although rented land and residential buildings would appear in large part as real estate on tax returns of decedent owners. This discrepancy, however, has no effect on our top share and composition estimates.

and we estimate the CSV of pensions as 5% of total pension fund reserves. This approximation is of little consequence as pension fund reserves are less than 5% of total net worth (and hence the CSV of pensions is a negligible component of total net worth).

Pension funds assets are invested in corporate equities and fixed claims assets. We compute the total amount invested in corporate equities from Table B100e, Row 13 (see above); the amount of fixed claims assets is then obtained by substraction.

For the period since 1988, we defined our wealth measure as net worth of households and nonprofit organizations less the net worth of nonprofit organizations. For the period before 1988, the category tangible assets allows the separation between the household and the nonprofit sector. The category financial assets does not provide the breakdown and therefore, we have assumed that the fraction of financial assets in the nonprofit sector has stayed constant and equal to the fraction for 1988 (the earliest year this estimate is provided). This assumption seems reasonable because the share of nonprofit for the tangible asset category does not display a trend and stays around 10% between 1945 and 1988. It is important to note that, in the FFA, tenant occupied real estate for buildings with more than four units is not included in the real estate category but included in equity in non-corporate business. We follow the same rule although it should be noted that tenant occupied real estate (even for buildings with more than four units) will most likely appear in the real estate category in the estate of the owner.

The category liabilities is partially broken down between the household and the non-profit sector for the period 1945 to 1987. Three separate sub-categories (municipal securities, commercial mortgages, and trade payables) are liabilities of the nonprofit sector exclusively. In the period 1988 to 2002, those three categories represent about 70% of all nonprofit liabilities. Therefore, for the period 1945 to 1987, we have assumed that the total liabilities of the nonprofit sector is equal to 1/0.7 times the sum of those three sub-categories.

In any case, the fraction nonprofit in the FFA of households and nonprofits is between 5% and 10%, and closer to 5% for the liability and financial assets categories for which we need to do imputations. Therefore, we expect that errors in our imputations will lead to a very modest bias in our net worth estimates (no more than 1-2%) for the period 1945-1987.

Period 1916-1944

Estimating total household net worth in the prewar period is complicated, because there is no single official source and most sources provide estimates only for some years during the period. An earlier attempt to compute household wealth from various sources is Wolff (1989). However, he provides estimates only for years 1900, 1912, 1921, 1922, 1929, 1933, and 1939 for the pre-1945 period. Our estimates are very close to his W2 series for those years. We build upon his methodology and the same sources he did to extend our estimates to every year from 1916 to 1944.

Tangible assets are estimated as follows. For 1925 to 1945, consumer durables are taken from the FFA series reported in Herman (2000), Table 1, Consumer durable goods column. For 1916 to 1924, we have used Goldsmith et al. (1956), Table W1, p. 14, column 12, Consumer durables. The earlier Goldsmith series has been pasted (using a constant multiplicative factor) so that they coincide with the most recent and official FFA series in 1925 (in 1925, Goldsmith series about 10% higher than the FFA series).

Residential land series is from Goldsmith et al. (1956), Table W1, p. 15, column (21), non-

farm residential land. Owner occupied residential structures is from the Bureau of Economic Analysis at http://www.bea.doc.gov/bea/dn/faweb/, Table 5.1, col. 14, for the period 1925 to 1945. For 1916 to 1924, we have used Goldsmith et al. (1956), Table W1, p. 14, column 4, nonfarm residential structures. The Goldsmith series for 1916-1925 have been pasted (using a constant multiplicative factor) to coincide with the most recent and official BEA series in 1925 (in 1925, Goldsmith series about 20% higher than the BEA series because they include tenant occupied housing as well).

Tangible assets are defined as the sum of those three series: consumer durables, non-farm residential land, and owner occupied residential structures. This series is about 8% higher in 1945 than the tangible assets series from the FFA (see above). Thus, we have reduced uniformly our tangible assets series by about 8% before 1945 so that they match exactly in 1945.

Unlike Tangible Assets, there is no annual source available for each of the categories forming the financial assets and liabilities of the household sector. Goldsmith et al. (1956) provide detailed estimates of the financial assets, and liabilities of the household sector only for years 1900, 1912, 1922, 1929, 1933, 1939, 1945, and 1949. Wolff (1989) uses the Goldsmith estimates and reconciles them with the FFA estimates in order to cover the period 1900-1984. We therefore use the Wolff (1989) estimates available for the years 1912, 1922, 1929, 1933, 1939, and 1945,[83]

Financial assets are divided into fixed claimed assets (deposits and currency, federal bonds, state and local bonds, corporate and foreign bonds) and equity (corporate stock, equity in farm businesses, equity in non-farm unincorporated businesses, trust equity). The Wolff (1989) estimates for each of these categories are reported in Table 5, "Final National Balance Sheet Estimates for the Household Sector for W2, by Detailed Component, 1900-1983", in the electronic data appendix to the paper that Professor Edward Wolff kindly made available to us.

We start from the Wolff (1989) estimates and we interpolate in between the years as follows.

For deposits and currency, state and local bonds, corporate and foreign bonds, and liabilities, we have done a straight linear interpolation between each consecutive pair of years for which Wolff (1989) provides estimates. Each of these items is relatively small and was trending upward relatively smoothly over the period.

For federal bonds, we interpolate between the years using the total outstanding Federal Debt series from *Historical Statistics of the United States* (Series Y493).[84] The interpolation proceeds as follows: we compute the ratio of federal bonds in household wealth to outstanding federal debt for the years available in Wolff (1989). In between those years, we assume that this ratio evolves linearly, and this allows us to estimate the amount of federal bonds in household wealth for each year.

We proceed in the same fashion for corporate equity using the S&P500 index end of year series compiled on line by Robert Shiller at http://aida.econ.yale.edu/ shiller/data.htm. We also interpolate trust equity and unincorporated non-farm business equity using the same S&P500 index. Finally, we interpolate unincorporated farm business equity using an estimate of the value of farms from Goldsmith et al. (1956), Table W1, the sum of columns (7) farm structures,

[83]Wolff (1989) also provides estimates for year 1921 based on King (1927). King (1927) computes estimates only for year 1921 and is difficult to reconcile with the laterGoldsmith et al. (1956). Therefore, we do not use the King (1927) and Wolff (1989) estimate for 1921.

[84]Those series give the amount of debt on June 30th of each year. We estimate end of year amounts of debt in year t as the average of year t and t+1 from the original series.

(14) livestock inventories, (15) crops inventories, and (20) agricultural land. Contrary to the FFA series, Goldsmith and Wolff series do not include tenant occupied real estate for buildings with more than four units in the unincorporated business category. Therefore, in order to be consistent with FFA, we add tenant occupied residential structures from the Bureau of Economic Analysis at http://www.bea.doc.gov/bea/dn/faweb/, Table 5.1, col. 15 to the category equity in unincorporated businesses.[85]

Those interpolated series extend Wolff (1989) series for financial assets and liabilities for each year from 1912 to 1945. In order to paste those series to the series for the 1945-2002 period, we adjust by a proportional factor each the early series (1912-1945) for fixed claim assets (deposits and all bonds), corporate equity, non-corporate equity and trusts, and liabilities. For fixed claim assets, the adjustment is up by about 5%. For corporate equity, the adjustment is up by 10%, and for unincorporated equity (including tenant occupied housing), the adjustment is down by about 10%. For liabilities, the adjustment is about 2% up.

Overall, our series are within 5% of the Wolff (1989) W2 series, and often within 2-3%, with no trend over the period.[86]

From end-of-year to average-of-year estimates

All wealth series from FFA, Goldsmith et al. (1956), and Wolff (1989) are end-of-year estimates (for December 31st of each year). Estates represent wealth of decedents at time of death and hence are distributed fairly uniformly over the year. Therefore, for our denominator series, the best would be to obtain estimates of average aggregate wealth over the year. The simple approximation we use consists in estimating the average for year t as the half-sum of our end-of-year $t-1$ and end-of-year t series. Smith (1984) adopted this method to obtain top wealth shares for the 1958-1976 period. This approximation will be accurate when wealth is smoothly increasing or decreasing in between the two end-of-year snapshots.

The only adjustments we made to this simple method were for corporate stocks for years 1929, 1932, and 1933. This is because the annual average value of stock prices (estimated as the monthly average of the S&P 500 series) was substantially different than the end-of-year averages for the corresponding two consecutive years. Thus for those three years, we replaced the simple end-of-year average by the monthly average over the year.[87]

Appendix D.2 Estimates Based on Micro-Data: 1916-1945, 1962, 1965, 1969, 1972, 1976, 1982-2000

We take advantage of an extraordinary dataset available through the Statistics of Income (SOI) Division of the IRS.[88] The data include information from all of the estate tax returns filed for

[85]The BEA series are only available since 1925, we extrapolate the series from 1916 to 1925 using Goldsmith et al. (1956) non-farm residential structures as we did for owner occupied residential structures (see above).

[86]The only exception is 1972 for which our series derived from FFA are 7% higher than Wolff estimate.

[87]For all other years, the end-of-year average and the monthly average are very close and we did not do any adjustment.

[88]The dataset is confidential and is not released in its raw form. We are extremely grateful to Barry Johnson of the SOI for his help and patience in explaining the data and facilitating our access to it by running our SAS programs at the SOI.

deaths occurring between 1916 and 1945,[89] all returns filed in 1963, samples of returns filed in 1966, 1970, 1973, 1977 and samples of returns corresponding to years of death between 1982-2000. For all years however, there is 100% coverage of very large estates (those corresponding roughly to our top .01% group). A more detailed description of the 1916-1945 data can be found in McCubbin (1990), while the post-1945 studies are described in Johnson (1994).

We rely on the relevant year-of-death datasets to characterize wealth distributions for 1916-1945 and 1982-2000. We use returns filed in 1963, 1966, 1970, 1973, 1977 to construct wealth percentiles for 1962, 1965, 1969, 1972, and 1976 respectively, regardless of the actual year of death. For 1962-1976, this choice is motivated by the sample design: in the absence of regular sampling, no other approach is feasible. Conveniently, this period does not involve any significant legislative activity and most returns filed in year t+1 correspond the deaths in year t.[90] We always ignore observations for which *net worth* falls below the filing threshold because not 100% of estates with net worth below the filing threshold file estate tax returns.[91]

We impute estate multipliers when age is missing. Age of the decedent was present on the tax return beginning with the August 1919 revision of the tax form. As a result, we do not have age information for most of the decedents dying between 1916 and 1918. We also do not know age for any of the 1965 observations. We do have age data for 77% of the 1919 decedents, 88% of the 1920 decedents and we have age information for over 90% of our sample in each of the remaining years (between 1982 and 1995, we have age information for everyone). In years when age information is available for most observations, imputations are performed by setting the multiplier equal to the average of the multipliers of the 50 individuals in the wealth distribution surrounding the one with missing age information. In order to impute multipliers between 1916 and 1918, we proceed in an identical fashion, but we place each observation in the 1919 distribution (adjusted for inflation) and base our imputations on the surrounding 1919 observations. Imputations in 1965 are performed similarly by using the joint distribution of 1962 and 1969 returns as the reference distribution.

Age is coded in the data using two digits. Except for 1982-1983, the age variable is top-coded at 98, in 1982 the value of 96 stands for "96 or above", while in 1983 the value of 97 stands for "97 or above". Using the top-coded value would lead to overestimation of the corresponding multiplier, since some of the individuals are in fact older and therefore faced higher mortality risk than the top-coded value would indicate. To correct this problem, we use as a multiplier for top-coded observations the average (using population weights) multiplier for those aged at the top code or above.

As discussed earlier, the filing threshold and therefore the coverage of our data changed many times over the years.[92] Post-1945, all tax changes went into effect as of midnight December 31st, but the earlier reforms generally did not take place on such end-of-year dates. There were four changes in the filing threshold that became effective in the middle of a year: on 2/26/1926, 6/6/1932, 8/30/1935 and 10/21/1942. The 1926 and 1942 changes increased the threshold,

[89] Returns filed after 1945 are also included.

[90] The latest year available is for estate tax returns filed during calendar year 2002. This year contains about 8% of returns for individuals deceased in 2000 and less than 1% for individuals deceased in 1999 or before. We are therefore confident that extremely few estates for 2000 decedents will be filed in years 2003 or later.

[91] A number of estates with net worth below the filing threshold do file estate tax returns because the filing threshold is defined based on gross worth.

[92] We ignore the issue of inflation effects within a year which makes individuals with the same real net worth more likely to be subject to the tax if they die later in the year

the other two decreased it. Furthermore, the estate tax was adopted starting September 9th 1916, so that we do not have the full coverage for 1916. In those cases, we naturally re-weight observations available for part of the year only by the inverse of the part of the year with lower threshold.[93] This amounts to assuming that decedents dying during the part of the year when the low threshold was effective constitute a representative sample of decedents of similar wealth dying during the other part of the year.

Where relevant, we rely on the sample weights provided by the SOI. Post-1945 samples are stratified samples of returns actually filed. Generally, all returns above a certain high level of wealth are included in the data ($5 million in most years), while returns below that level are sampled using a complex design (Woodburn and Johnson, 1994). Certain rare types of returns (e.g., individuals aged 45 or younger) are included with certainty. In the 1980s, returns were sampled every year but samples for certain years (1982, 1986, 1989) are significantly larger, with samples for intermediate years treated as supplementary. This design reflects the fact that at the time of the studies, one of the main SOI objective was to be able to produce wealth estimates every three years. Beginning with 1991, the sampling strategy is essentially consistent over time.

We assign observations to the various top groups as follows. We define the corresponding population count of an observation as the product of the sampling weight and the multiplier. We use these weights we compute the rank of an individual in the distribution of net worth. We then compute the thresholds of the fractiles of interest using the U.S. population over 20 in a given year estimated from U.S. Bureau of the Census (1975) (series A29-32) and U.S. Bureau of the Census (2002) (Table 2-12). Individuals who are located on the boundaries of two top groups contribute to both of them in proportion to their overlap with each. All reported tabulations are performed using top groups defined in this way.

For 1916-1945, the data are not equally detailed for all observations. As mentioned, all returns that were filed are included in the data and they are all subject to the so called "basic edit," while only selected observations are subject to the "complete edit." The former includes basic information from the tax return such as age, sex, marital status, date of death, state of residence, gross estate, debts, life insurance and a few other variables. The latter includes in addition information on the composition of estates. Sub-samples of returns for decedents who died in 1916-1920, 1928-1930, 1938-1940 and 1944 were subject to the complete edit. In addition, gross estates above some high threshold were always subject to the complete edit. As the result, for 1916-45 we are able to construct the complete estate composition series for the top 0.01% based on the complete coverage of decedents, while the composition for lower percentiles is available only for selected years and is usually based on a sample of returns.

Column 2 of Table A displays the shares of population that we estimate are covered by our data in each year. Table D contains basic information about the size and information contained in our sample, by percentile category. Its first panel lists the number of observations in each percentile category. When no figure is shown, it indicates that filling out this category would require including individuals with net worth below the threshold level. The second panel presents average sample weights in various percentile groups, by year.[94] In practical terms, our estimates

[93]For example, on June 6, 1935 the filing threshold was decreased from $100,000 to $50,000. As a result, we use only deaths occurring after June 6 to estimate wealth between $50,000 and $100,000 and re-weight those observations by a factor 365/208 (208 is the number of days between June 6th and the end of the year). We re-weight all observations in 1916 by a factor 366/114 (1916 was a leap-year).

[94]The weight can be lower than 1 for observations which span two different categories. By construction, it

of the top 0.01% wealth are based on returns sampled with certainty, while estimates in lower percentiles are for many years based on samples. It is clear from this table that the data for 1983-1985 and for 1987-1988 is based on the much sparser sampling than those in other years. The last part of Table D shows the fraction of observations in each category that contain detailed composition information about asset holdings.

Appendix D.3 Estimates Based on Published Tabulations: 1946-1950, 1953-1954, 1956, 1958, and 1960

For years 1946, 1947, 1948, 1949, 1950, 1953, 1954, 1956, 1958, and 1960, the IRS has not constructed micro-data files but has published a set of detailed tabulations in U.S. Treasury Department, Internal Revenue Service (various yearsa). We have used those Statistics of Income (SOI) tabulations to estimate top wealth shares and composition for those years as well.

SOI tabulations are always presented by year of filing: as most estates are filed within 9 months of death, we assume that year of filing t corresponds to year of death $t-1$.[95] The SOI publication contains cross-tabulations by size of gross estate and age groups (for each of the two genders) for years 1948, 1949, 1950, 1953, and 1958. For all years but 1958, the age groups are quite detailed and defined as 0-20, 21-29, 30-39, 40-49, 50-54, 55-59, 60-64, 64-69, 70-74, 75-79, 80-84, and 85+.[96]

For each age group and gender cell, we compute the estate multiplier as the product of the average mortality for the cell[97] and the social differential mortality factor from Brown et al. (2002) (see above). We multiply the number of decedents and the amount of gross estate they report by the estate multiplier in order to obtain a distribution by gross estate brackets for the living population. Because the number of observations in the very top brackets is small, the corresponding multipliers tend to be noisy and vary from bracket to bracket and year to year. Therefore, for each gender group, we average multipliers for all estates above one million nominal dollars for years before 1950 and above two million nominal dollars for 1953 and after. Such estates are very large and always represent less than the top 0.01% which is the smallest group we analyze in this study.

We then estimate the thresholds and amounts corresponding to each fractile using the well known empirical regularity that the top tail of the wealth distribution is very closely approximated by a Pareto distribution.

The first step consists then in estimating the income thresholds corresponding to each of the percentiles Top 2%, Top 1%, ,..., Top 0.01% thresholds, that define our top wealth groups. For each percentile p, we look first for the wealth bracket $[s,t]$ containing the percentile p. We then assume that the distribution of wealth is Pareto distributed within the bracket $[s,t]$. A Pareto distribution has a cumulative distribution function of the form $F(y) = 1-(k/y)^a$ where k and a are constants, a is the Pareto parameter of the distribution. We estimate then the parameters

applies to at most two observations in a group.

[95] Micro-files from the IRS show that this assumption is reasonable although not completely accurate because many returns are filed late. The overwhelming majority of returns filed in year t are composed by returns for date of death $t-1$ (about two thirds) and date of death $t-2$ (about one third).

[96] For year 1958, the age groups are less detailed: 0-30, 30-39, 40-49, 50-59, 60-69, 70-79, and 80+.

[97] This average mortality is computed using the mortality tables for the U.S. population by 5 year age and gender groups available at http://www.demog.berkeley.edu/wilmoth/mortality/states.html

a and k of the Pareto distribution for the wealth bracket $[s,t]$ by solving the two equations: $k = s \cdot p^{1/a}$ and $k = t \cdot q^{1/a}$ where p is the fraction of individals above s and q the fraction of individuals above t. Note that the Pareto parameters k and a may vary from bracket to bracket.[98] Once the density distribution on $[s,t]$ is estimated, it is straightforward to estimate the income threshold, say y_p, corresponding to percentile p.

The second step consists of estimating the amounts of wealth reported above wealth threshold y_p. We estimate the amount reported between wealth y_p and t (the upper bound of the wealth bracket $[s,t]$ containing y_p) using the estimated Pareto density with parameters a and k. We then add to that amount the amounts in all the brackets above t. Using the micro-data, we have checked that this method provide very close estimates of the thresholds and amounts.

Gross estate is defined as the sum of all assets (including life insurance) before deducting debts and liabilities, and all other deductions. Therefore, to obtain net worth estimates, we need to deduct life insurance and liabilities from our gross worth estimates and add back the cash surrender value of life insurance. We estimate the cash surrender value of life insurance from the pay-out value using the same method as the one described above for micro-data. For each fractile, we compute the fraction of life insurance and the fraction of debts relative to gross worth using the method to estimate composition of wealth described below. We then subtract from the amounts and thresholds corresponding to each bracket the fraction of debt and life insurance and we add back the cash surrender value of life insurance.[99] This method provides accurate results when the ranking according to gross estate and the ranking according to net worth (gross estate less life insurance and debts plus CSV of insurance) are close. Using the micro-data, we can check that those rankings are close and that our method provides results very close to the exact computations (both can be computed with the micro-data).[100]

Once the corrected amounts and thresholds are obtained, we obtain directly the mean income above percentile p by dividing the amount by the number of individuals above percentile p. Finally, the share of income accruing to individuals above percentile p is obtained by dividing the total amount above y_p by our aggregate wealth series (Table A, col. (4)). Average wealth and wealth shares for intermediate groups (Top 2-1%, Top 1-0.5%, etc.) are obtained by subtraction. The shares are reported in Table B1, and the thresholds and average wealth levels are reported in Table B2.

For years 1946, 1947, 1954, 1956 and 1960, the IRS has not published tabulations by brackets of gross estate, by age and gender. Therefore, for those years, we apply the multipliers by brackets obtained above using the closest year. For 1946 and 1947, we use the multipliers from 1948. For year 1954, we use year 1953. For years 1956, we use the average of 1953 and 1958. For 1960, we use year 1958. This method is acceptable because multipliers by wealth brackets vary little from year to year.

For years 1946, 1947, 1948, 1949, 1953, 1954, 1958, and 1960, composition tables published

[98] If the threshold falls in the top bracket, we estimate the Pareto parameter a for the top bracket using the fact that the average wealth in the top bracket is equal to $a/(a-1)$ times the top bracket threshold.

[99] For each threshold, we subtract the average fraction of debt and life insurance and add back the CSV of life insurance from the bracket above and the bracket below.

[100] For years 1950 and 1956, no composition tables have been published. Therefore, we assume the same average liabilities and life insurance as the average of 1954 and 1958 by bracket for 1956 and years 1949 and 1951 for year 1950.

by brackets of gross estates have been used to estimate the fraction of net worth for each fractile falling into each of the categories: real estate, bonds, stocks, cash, deposits and notes, other assets, and debts. The composition of wealth within each group was estimated from these tables using a simple linear interpolation method. As those composition tables are not published by age or gender, we assumed that the composition by brackets was the same for the living population and for decedents. This assumption does not seem to bias our results significantly as we see no evidence of discontinuity with the years where we can use the micro-data and hence relax this assumption. The composition estimates are also reported on Table B3.

As we discussed above and as can be seen in Table D, for a number of years during the period 1916-1945, the micro estate tax data do not provide composition information for returns with gross estate below a very high threshold for years 1921-1927, 1931-1937, 1941-1943, and 1945. For all these years, except 1926 and 1945, we have used the published composition tabulations by size of estate from U.S. Treasury Department, Internal Revenue Service (various yearsa) to estimate the composition of net worth for our top groups using the same methodology as above.

Appendix D.4 Pareto Extrapolations when Coverage is too Low

As can be seen on Table A, column (3), for a number of years and especially in the 1916-1945 period, the estate tax data does not cover the top 1% of the population (or even the top .5% for some years). In order to produce top 1% shares for all years, we have used a simple Pareto extrapolation technique to estimate those shares. We assume that the Pareto coefficient for the groups for which we do not have enough data is the same as the one for the lowest group fully covered by our data. For example, in 1918, as the data covers the top 0.571%, the lowest group covered is the top .5-.25%, and we assume that the Pareto parameter for group 1-.5% is the same of the Pareto parameter we estimated for the group .5-.25%. This method is acceptable because the variations in the Pareto parameters are relatively small from one group to the next. This method can be checked with years with good coverage.

Appendix D.5 Sensitivity to certain data inconsistencies

As discussed earlier, between 1942 and 1948 the gross estate was supposed to include the full value of community property. This change took place in October 1942. By definition, this rule affected directly only married individuals, although an effect (with a lag) on widows is also possible. Its mechanical consequence is a temporary increase in the reported assets of the married individuals in community property states. As the result, if this change had a significant effect, it should affect the values of estates of married residents of the community property states relative to the rest. Figure A6 shows fractions of the top .05% and Top .25-.05% accounted for by residents of the community property states, by marital status. The mechanical effect should lead to an increase in the share of community property residents among married individuals in the top group but not necessarily in the other groups. The evidence of such a change is weak. The share of married community property residents in the top group indeed increased in 1943 but then fell back to the usual level. The trend is much stronger for single individuals (who are not affected by the change). In the lower bracket, it appears that the share of community property residents among the married was indeed increasing relative to other groups, but the

effect is the strongest some two years after the change went into effect. Overall, we conclude that there is no evidence that this source of data inconsistency plays an important role.

The tax treatment of jointly owned property changed in 1976 and 1981 by allowing to include only 50% of jointly held assets in the estate of the decedents. Our dataset includes the value of the includible portion of jointly owned assets as reported on Schedule E for 1962, 1972, 1976 and from 1982 on. Starting with 1992, we can observe both total and the includible part of assets jointly held with the spouse. Indeed, approximately 50% of the total is included. Assets held jointly with the spouse constitute more than 80% of all jointly held assets in all wealth categories. Generally, the importance of jointly owned assets falls with wealth. There is little evidence of a significant decrease of the value of jointly held assets included in the estate after 1976. In the top .1%, the includible part of jointly held assets was approximately 2.3% of the total net worth in 1972, 1.1% in 1976 and it fluctuated between .7 and 4% (with the mean of 2.2%) since, with no discernible trend. At lower percentiles, there is similarly no evidence of a major decrease in the included jointly owned assets (although the importance of jointly owned assets is much larger: they steadily increase as net worth falls and, e.g., they are more than 10% of net worth around the .5% percentile). Speculating somewhat, because the change in tax law should have had a mechanical effect of halving the jointly owned property, it suggests that additional outside assets might have been reported as jointly owned, presumably to benefit from a step-up while escaping taxation via marital deduction. If so, doubling jointly owned property after 1976 would lead to a significant overestimation of net worth relative to the pre-1977 period. In any case, at least at the very top, how jointly owned assets are accounted for would have no major impact on our shares. Either doubling of the post-1976 jointly owned property or including a fraction of the pre-1977 would change the shares only in a minor way (in the top .1%, net worth would change by approximately 2%). Such a change would lead to showing a slightly stronger recovery in the early 1980s without an effect on trends pre- or post-1976.

Appendix E Earlier Estimates and Estimates from other Sources

Table C1 reports top 1% wealth share estimates in the United States from previous studies.

Appendix E.1 Lampman Estimates

Lampman (1962) was the first to use in a comprehensive way the U.S. estate tax data to construct top wealth shares. He focused his analysis on years 1922, 1929, 1933, 1939, 1945, 1949, 1953, 1954, and 1956, for which the IRS published detailed tables by age and gender groups. However, for all these years, Lampman's analysis is always focused on all estate tax returns filers as a whole representing the living population of wealth holders with gross wealth above the filing threshold. Because of inflation, economic growth and downturns, and changes in the nominal filing threshold, the adult population represented by estate tax filers has changed dramatically from less than 0.5% in 1929 to almost 2% in 1956. Lampman's provides consistent top wealth 1% shares for the adult population (aged 20 and above) from those estimates using a simple graphical Pareto interpolation method (Table 94 and Chart 32 on pp. 204-205).[101] He assumed

[101]Lampman also provides estimates of the top 0.5% share of the total population (adults and minors) using the same method. As a result, the top 1% and top 0.5% Lampman series are not comparable.

that the Pareto parameter for all years was equal to the one estimated for 1953 (for which he provided much detail in the first part of the book).

Therefore, although Lampman's study was very detailed and careful in the analysis of the group represented by all estate tax filers, his derivation of consistent top shares, the most influential piece in his study, was very rough. Our own estimation method shows that the Pareto parameters do vary substantially from year to year. The Pareto parameter for year 1953 in the range Top 1-0.5% (which Lampman used for the other years) is equal to about 1.6 but is lower for pre-war years (around 1.3). Therefore, Lampman's graphical method might have introduced non-negligible errors, especially for the years for which the fraction of the population represented by tax returns is far from 1%. It is also important to note that there are many other reasons why our estimates might differ from Lampman's, as his definition of net worth is not identical to ours, and the social differential mortality rates are also different.

Nevertheless, overall, Lampman's estimates (reproduced in Table C1 and graphically displayed on Figure 11) are comparable to ours. The downward trend is of similar magnitude. The main difference is for 1939. Our series suggest than there was a continuous decline in the top 1% from 1933 to 1945, while Lampman's series displays a rebound in 1939. This discrepancy is in part explained by differences in our denominator series. Lampman denominator is relatively low in 1939 (displaying less than a 10% increase from 1933) whereas our denominator increases by about 20% (in nominal terms). Both Wolff (1989) and Goldsmith et al. (1956) display a similar 20% increase in nominal terms from 1933 to 1939.

Appendix E.2 Smith Estimates

Smith (1984) constructs top 0.5% and 1% net worth shares for years 1958, 1962, 1965, 1969, 1972, and 1976 using micro estate tax data. He also estimates the composition of wealth for those two groups. Smith defines the top groups relative to the total population instead of adults (as we do). Moreover, because of data issues, the top groups are defined by ranking individuals by gross worth instead of net worth (although shares are computed based on the net worth concept). Those two features make Smith's data not directly comparable with our results and with the previous estimates by Lampman.[102]

Appendix E.3 SCF and Combined Estimates

Kennickell (2003) and Scholz (2003) have used the Survey of Consumer Finances to construct top net worth shares. Kennickell (2003) estimates shares and composition of wealth for 5 groups: the bottom 50% (percentiles 0-50), the next 40% (percentiles 50-90), the bottom half of the top decile (percentiles 90-95), the next 4% (percentiles 95-99), and the top 1%. Those estimates are provided for years 1989, 1992, 1995, 1998, and 2001.[103]

Scholz (2003) provides wealth shares for the top 10%, 5%, 2%, 1%, and 0.5% for all survey years available: 1962, 1983, 1989, 1992, 1995, 1998, and 2001. Kennickell (2003) uses the non-public large SCF data which have a more observations at the very top and which are not included

[102] The top .5% Smith series, however, can be compared more easily with the top .5% Lampman series for the total population. See footnote above.

[103] According to Kennickell, earlier surveys, 1962 and 1983 are not directly comparable due to substantial changes in the surveying and weighting methodology.

in the publicly available SCF data used in Scholz (2003). This, however, seems to have only a minor effect on the estimates as Kennickell's and Scholz' top wealth share estimates are very close.

Wolff and Marley (1989) and Wolff (1994) provides top 1% household wealth shares based on the previous estimates by Lampman and Smith from estate tax data and more recent estimates from the SCF.

Appendix E.4 Computations Based on Forbes 400 Richest

Every late September since 1982, *Forbes* magazine has constructed a list of the richest 400 Americans, along with estimates of their net worth, age, and the main source of their wealth. It is important to keep in mind that those wealth estimates are not exact measures of net worth as some of those richest individuals may not be willing to cooperate with Forbes and reveal precisely their net worth. It is also possible that some of the wealthiest (but not highly visible) Americans have not been discovered and listed by Forbes.[104] This problem was more acute in the early years of the survey (especially the first year 1982).[105] With the years and the incredible success and publicity of the Forbes 400, most wealthy individuals provide voluntarily information to Forbes and it is quite unlikely that a significant fraction of the wealthiest Americans has been able or willing to escape the attention of Forbes magazine.

We report in columns (1) and (2) of Table C2, the total net worth of the Forbes 400 and the average wealth of the Forbes 400 in 2000 dollars.

Because the total adult population has increased by almost 30% over the period, measuring the share of total net worth of the Forbes 400, might be misleading. In order to provide estimates robust to population growth, we have constructed series for the top .0002% and top .00005% wealth shares from 1982 to 2002. We also provide the share of top .0002-.00005% which is simply the difference of the two former shares. The top .0002% corresponds almost exactly to the top 400 richest individuals, and the top .00005% to the top 100 richest individuals in 2000 (as there are 201.9 million adults in the population in 2000, see Table A). The top .0002-.00005% corresponds to individuals ranked 101 to 400 in 2000. The shares are computed simply by summing the net worth levels of the corresponding individuals on the Forbes list.[106] For the final years (2000, 2001, and 2002), the top .00005% corresponds to a few more individuals than the top 400. In that case, we use the complementary list of near misses (those individuals who almost made it to the Forbes 400) to compute our estimates.

The shares of those three groups are reported in columns (3), (4), (5), and the ratio of the average wealth to the average wealth in the adult population is reported on columns (6), (7), and (8) for each of these three groups. Finally, and for comparison purposes, the share of the top .01% (top 20,000 individuals in 2000) estimated from estate tax returns is reported in column (9).

[104]For example, the SCF has found believable interviews of individuals with wealth above the Forbes 400 minimum but not included in the Forbes list (see Kennickell, 2003). Estate tax returns with net worth above the Forbes 400 minimum have also been found by the IRS (see McCubbin, 1994).

[105]This is why we do not reproduce very top wealth shares from the Forbes 400 for year 1982, the first year of the survey, on Figure 12.

[106]For example, if the top .00005% corresponds to the top 100.5 individuals, we sum the top 100 wealth levels plus one-half of the wealth of the 101st individual.

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Table 1

Thresholds and Average Wealth in Top Groups within the Top 2% in 2000

Percentiles	Wealth Threshold	Upper Groups	Number of individuals	Average Wealth
(1)	(2)	(3)	(4)	(5)
		Full Population	201,865,000	$163,161
2.00%	$729,932	Top 2-1%	2,018,650	$920,073
1.00%	$1,172,896	Top 1-0.5%	1,009,325	$1,472,456
0.50%	$1,841,697	Top 0.5-0.25%	504,663	$2,314,011
0.25%	$3,067,676	Top 0.25-0.1%	302,798	$3,989,132
0.10%	$5,503,678	Top 0.1-0.05%	100,933	$6,717,885
0.05%	$8,219,720	Top 0.05-0.01%	80,746	$12,675,629
0.01%	$24,415,150	Top 0.01%	20,187	$63,564,151

Notes: Computations based on estate tax return statistics (see Appendix Section D).

Wealth defined as total assets less liabilities. It includes the estimated cash surrender value of life insurance.

It excludes annuitized wealth, and future pensions with no cash surrender value, future labor income and

social security benefits. Amounts are expressed in 2000 dollars.

Source: Table A and Table B2, row 2000.

Table A: Reference Totals for Population, Wealth, and Inflation, 1916-2002

	Adult population		Personal Wealth		Wealth Composition (in percent)						Inflation
	(1) Population (aged 20+) ('000s)	(2) Population covered by estate tax returns	(3) Total Wealth (billions 2000 $)	(4) Average Wealth (2000 $)	(5) Real Estate and Durables	(6) Fixed Claim Assets	(7) Corporate Equity	(8) Non-Corp. Equity	(9) Life Insurance Reserves	(10) Liabilities	(11) CPI-U (2000 base)
1916	60,063	0.454%	3,011	50,127	24.2	19.5	21.1	38.4	2.7	-5.7	6.324
1917	60,914	0.482%	2,770	45,481	26.5	20.3	17.8	38.4	2.7	-5.7	7.425
1918	60,477	0.571%	2,621	43,346	28.4	21.2	15.3	38.0	2.6	-5.6	8.716
1919	61,758	0.718%	2,709	43,868	29.2	20.5	15.6	37.3	2.3	-5.0	10.015
1920	63,117	0.770%	2,494	39,521	31.2	20.9	14.4	36.2	2.3	-5.0	11.598
1921	64,360	0.718%	2,667	41,432	31.4	23.1	14.3	34.1	2.6	-5.6	10.357
1922	65,237	0.716%	2,895	44,374	29.4	23.9	16.9	32.9	2.7	-5.8	9.704
1923	66,498	0.705%	3,000	45,110	29.8	23.7	17.7	32.2	2.8	-6.2	9.879
1924	67,945	0.734%	3,136	46,153	30.7	23.6	18.4	31.3	3.1	-7.0	9.899
1925	69,137	0.738%	3,298	47,709	30.1	22.8	20.7	30.6	3.2	-7.5	10.146
1926	70,348	0.763%	3,471	49,342	29.9	22.4	22.5	29.9	3.3	-8.0	10.248
1927	71,615	0.389%	3,796	53,005	28.9	21.8	25.2	29.1	3.4	-8.3	10.053
1928	72,882	0.399%	4,314	59,191	26.8	20.2	29.6	28.2	3.3	-8.1	9.922
1929	74,112	0.430%	4,773	64,401	25.1	19.0	34.6	26.1	3.2	-8.1	9.922
1930	75,505	0.380%	4,281	56,701	28.4	21.9	27.6	27.5	3.9	-9.2	9.674
1931	76,620	0.296%	3,892	50,792	31.1	25.7	20.8	27.6	5.0	-10.2	8.823
1932	77,683	0.416%	3,548	45,674	33.4	30.7	13.4	27.5	6.3	-11.4	7.914
1933	78,764	0.420%	3,785	48,052	31.4	29.7	14.8	27.7	6.5	-10.2	7.510
1934	79,915	0.423%	3,917	49,016	30.0	27.4	16.9	28.3	6.4	-9.0	7.766
1935	81,064	0.544%	4,054	50,006	28.8	25.7	18.4	29.2	6.5	-8.5	7.960
1936	82,156	0.608%	4,535	55,205	26.6	22.6	22.0	30.3	6.1	-7.6	8.040
1937	83,216	0.618%	4,417	53,080	28.2	22.2	20.4	30.3	6.4	-7.5	8.329
1938	84,344	0.604%	4,365	51,758	30.3	22.7	17.7	30.1	6.9	-7.8	8.171
1939	85,486	0.620%	4,570	53,464	30.2	21.8	18.1	30.4	7.0	-7.6	8.056
1940	86,832	0.620%	4,627	53,288	31.3	22.6	16.3	29.8	7.3	-7.5	8.137
1941	88,173	0.657%	4,610	52,287	32.9	24.4	13.4	28.9	7.6	-7.2	8.544
1942	89,560	0.663%	4,550	50,802	33.0	25.8	11.8	28.5	7.4	-6.6	9.458
1943	90,999	0.552%	4,867	53,485	31.4	26.8	12.1	28.5	7.0	-5.8	10.035
1944	92,376	0.700%	5,408	58,543	29.8	27.8	12.7	28.2	6.6	-5.2	10.205
1945	93,697	0.827%	6,025	64,306	27.7	28.3	14.4	28.0	6.1	-4.6	10.440
1946	94,933	1.176%	6,221	65,533	27.3	28.0	14.5	29.0	5.9	-4.6	11.328
1947	96,183	1.303%	5,918	61,526	29.4	26.7	12.7	30.7	5.9	-5.3	12.959
1948	97,552	1.341%	5,884	60,320	31.7	25.3	11.6	31.5	5.8	-6.0	13.969
1949	98,941	1.410%	6,233	62,993	33.6	24.4	11.5	31.2	5.9	-6.6	13.830
1950	100,224	1.494%	6,567	65,524	35.3	23.4	12.5	30.3	5.8	-7.4	13.968
1951	101,452		6,638	65,431	36.5	22.1	13.8	29.7	5.6	-7.8	15.072
1952	102,626		6,928	67,507	37.5	21.9	14.1	29.2	5.6	-8.3	15.403
1953	103,611	1.884%	7,101	68,539	39.0	22.6	13.5	28.5	5.6	-9.1	15.526
1954	104,623	1.861%	7,432	71,036	39.4	22.5	14.9	27.3	5.6	-9.7	15.604
1955	105,603		8,037	76,109	39.2	22.1	17.8	25.8	5.4	-10.4	15.542
1956	106,687	2.266%	8,483	79,514	39.5	22.1	19.2	24.9	5.3	-11.0	15.775
1957	107,748		8,522	79,090	40.5	22.5	18.4	24.9	5.3	-11.5	16.343
1958	108,710	2.611%	8,761	80,595	40.3	22.4	19.2	24.5	5.2	-11.7	16.784
1959	110,223		9,303	84,398	39.4	22.3	21.6	23.6	5.1	-12.0	16.918

1960	111,314	2.950%	9,526	85,579	39.7	22.8	22.0	23.1	5.1	-12.7	17.189
1961	112,450		9,978	88,733	39.1	22.8	23.4	22.6	5.0	-13.0	17.361
1962	113,754	2.700%	10,382	91,268	38.7	23.0	24.2	22.4	5.0	-13.4	17.552
1963	115,096		10,614	92,215	39.0	23.8	24.2	22.2	5.0	-14.3	17.762
1964	116,796		11,108	95,103	38.5	24.2	25.7	21.5	4.9	-14.9	17.993
1965	118,275	2.923%	11,737	99,231	37.5	24.2	27.5	21.1	4.8	-15.2	18.299
1966	119,724		11,963	99,918	38.0	24.9	26.4	21.4	4.8	-15.6	18.830
1967	121,143		12,425	102,562	38.1	25.3	26.2	21.2	4.7	-15.6	19.376
1968	123,507		13,343	108,037	37.3	24.6	28.5	20.2	4.4	-15.0	20.190
1969	125,543	4.069%	13,447	107,108	38.6	25.0	26.9	20.4	4.3	-15.1	21.280
1970	127,674		13,026	102,028	40.3	26.2	23.7	20.9	4.4	-15.5	22.535
1971	130,774		13,420	102,619	40.2	26.4	23.5	21.0	4.2	-15.3	23.527
1972	133,502	5.343%	14,606	109,410	39.6	25.8	25.0	20.7	4.0	-15.1	24.280
1973	136,006		14,885	109,446	41.4	26.1	22.4	21.9	3.8	-15.6	25.785
1974	138,444		13,574	98,048	44.4	28.2	15.6	24.8	4.0	-17.0	28.621
1975	141,055		13,232	93,809	45.1	29.1	13.4	25.7	4.0	-17.3	31.226
1976	143,609	6.517%	14,136	98,433	44.5	28.3	15.2	25.1	3.7	-16.8	33.037
1977	146,305		14,686	100,378	46.0	28.1	14.2	25.5	3.5	-17.3	35.185
1978	149,142		15,125	101,413	48.2	28.0	12.1	26.4	3.4	-18.1	37.859
1979	152,105		15,518	102,022	49.1	27.5	11.8	26.8	3.1	-18.3	42.137
1980	155,268		15,701	101,122	48.8	26.8	12.8	26.7	2.9	-17.9	47.825
1981	158,033		15,739	99,594	49.2	26.9	12.3	26.5	2.7	-17.6	52.751
1982	160,665	1.966%	15,803	98,360	49.6	27.8	11.5	25.9	2.6	-17.5	56.022
1983	163,135	1.800%	16,275	99,767	48.8	29.1	12.1	24.9	2.6	-17.5	57.814
1984	165,650	1.483%	16,737	101,040	49.5	30.7	11.8	23.5	2.5	-18.0	60.300
1985	168,205	1.178%	17,700	105,231	50.7	32.0	11.9	21.7	2.3	-18.7	62.471
1986	170,556	1.147%	19,199	112,570	50.8	32.7	13.2	20.4	2.2	-19.3	63.658
1987	172,552	1.125%	20,086	116,408	50.9	33.3	13.4	19.7	2.2	-19.5	65.950
1988	174,344	1.046%	20,902	119,890	50.9	33.7	13.5	19.2	2.2	-19.4	68.654
1989	176,060	1.192%	21,736	123,460	50.5	33.2	14.9	18.5	2.2	-19.3	71.949
1990	178,365	1.305%	21,588	121,034	50.7	33.6	15.1	18.3	2.3	-20.0	75.834
1991	180,978	1.312%	21,630	119,519	49.9	33.8	16.6	17.7	2.4	-20.4	79.019
1992	183,443	1.371%	22,186	120,942	49.0	32.8	19.5	16.6	2.4	-20.3	81.390
1993	185,685	1.504%	22,478	121,053	48.8	31.9	21.4	16.1	2.5	-20.6	83.832
1994	187,757	1.541%	22,619	120,472	48.7	31.7	22.0	16.2	2.6	-21.3	86.011
1995	189,911	1.598%	23,407	123,251	47.8	30.8	24.1	16.2	2.6	-21.5	88.419
1996	192,043	1.808%	24,908	129,698	45.7	29.2	27.9	15.6	2.6	-21.0	91.072
1997	194,426	1.930%	26,847	138,082	43.3	27.7	31.9	15.0	2.5	-20.4	93.167
1998	196,795	2.032%	29,306	148,916	41.6	26.2	35.1	14.4	2.5	-19.8	94.657
1999	199,255	2.206%	32,183	161,519	40.0	25.0	38.3	13.5	2.4	-19.2	96.740
2000	201,865	2.072%	32,936	163,161	41.2	24.8	37.9	13.5	2.4	-19.8	100.000
2001	204,323		31,510	154,217	45.6	26.5	33.0	14.2	2.6	-21.8	102.846
2002	206,811		30,194	146,000	50.8	28.8	26.9	14.9	2.9	-24.2	104.472

Notes: Population estimates based on census data from Historical Statistics of the United States and the U.S. Statistical Abstract.
Population covered by tax returns is defined by the population represented, using the multiplier technique, by estate tax returns with net worth above the filing threshold.
Total wealth is defined as net worth of the personal sector excluding all future social security benefits and human wealth but including life insurance reserves.
Only the cash surrender value of pension reserves is included (such as vested defined contribution and 401(k) accounts).
The series is estimated from the Flow of Funds Accounts since 1945 and from several other sources before 1945. The series estimate average wealth during the corresponding year (and not end of year estimates). Wealth composition column reports the percent shares of tangible assets (owner occupied real estate and tenant occupied buildings with four units or less, consumer durables), fixed claim assets (cash and saving deposits, all bonds, mortgages), corporate equity, non-corporate equity (which includes tenant occupied net real estate for buildings with more than 4 units), and life insurance reserves. Liabilities include all debts (mortgages and consumer credit).
Columns (5) to (10) add up to 100%. The Consumer Price Index (CPI) series is used to express all nominal values into real 2000 dollars.

Table B1: Top Wealth Shares in the United States, 1916-2000

	Top groups							Intermediate Groups					
	2%	1%	0.50%	0.25%	0.10%	0.05%	0.01%	2-1%	1-.5%	.5-.25%	.25-.1%	.1-.05%	.05-.01%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(7)	(8)	(9)	(10)		(11)
1916		38.12	32.67	27.44	21.03	16.90	9.69		5.45	5.23	6.40	4.13	7.21
1917		35.58	30.17	25.15	19.31	15.47	8.85		5.41	5.02	5.84	3.84	6.62
1918		36.80	31.17	25.97	20.02	16.11	9.49		5.63	5.19	5.96	3.91	6.63
1923		39.93	33.82	28.42	22.39	18.38	11.32		6.11	5.40	6.03	4.01	7.06
1920		37.61	31.65	26.29	20.36	16.61	10.07		5.96	5.35	5.93	3.75	6.54
1921		35.22	29.12	23.68	17.54	13.68	7.48		6.10	5.43	6.15	3.86	6.20
1922		36.02	29.81	24.11	17.55	13.39	6.38		6.21	5.70	6.55	4.17	7.00
1923		35.22	29.49	24.13	17.80	13.66	6.84		5.73	5.35	6.34	4.14	6.82
1924		36.70	30.85	25.39	19.00	14.95	8.23		5.85	5.46	6.39	4.05	6.72
1925		36.02	30.08	24.77	18.45	14.55	7.79		5.94	5.32	6.31	3.90	6.76
1926		35.15	29.75	24.46	18.41	14.59	8.26		5.40	5.29	6.05	3.82	6.33
1927		39.21	33.19	27.72	21.28	17.19	10.16		6.02	5.46	6.45	4.09	7.03
1928		36.50	31.03	25.93	19.70	15.62	8.87		5.47	5.10	6.23	4.08	6.75
1929		36.76	31.84	26.91	20.80	16.65	9.15		4.92	4.93	6.11	4.16	7.49
1930		40.29	34.47	29.17	22.85	18.71	10.77		5.82	5.31	6.31	4.15	7.94
1931		34.70	29.47	24.63	18.77	14.87	8.25		5.23	4.84	5.85	3.90	6.62
1932		28.40	24.04	19.75	14.68	11.50	6.03		4.36	4.28	5.07	3.18	5.47
1933		30.31	25.80	21.46	16.28	12.91	6.91		4.51	4.34	5.18	3.37	6.00
1934		28.09	23.84	19.76	14.94	11.89	6.57		4.24	4.08	4.83	3.04	5.32
1935		27.77	23.76	19.69	14.98	11.88	6.54		4.01	4.08	4.71	3.10	5.34
1936		29.70	25.51	21.47	16.63	13.30	7.25		4.19	4.04	4.83	3.33	6.05
1937		26.97	22.64	18.73	14.22	11.37	6.14		4.32	3.91	4.52	2.85	5.23
1938		27.06	22.70	18.70	14.13	11.21	6.11		4.36	4.00	4.57	2.93	5.10
1939		25.95	21.59	17.65	13.18	10.40	5.56		4.36	3.94	4.47	2.78	4.84
1940		25.27	20.83	16.87	12.42	9.67	4.96		4.44	3.96	4.45	2.75	4.71
1941		25.30	20.74	16.71	12.35	9.67	5.02		4.56	4.03	4.37	2.67	4.65
1942		23.74	19.34	15.48	11.31	8.69	4.13		4.40	3.85	4.17	2.63	4.56
1943		24.26	19.46	15.35	10.96	8.35	4.23		4.80	4.11	4.39	2.62	4.11
1944		25.49	20.35	16.00	11.40	8.64	4.31		5.14	4.35	4.60	2.76	4.33
1945		24.65	19.38	15.05	10.54	7.92	3.69		5.27	4.33	4.51	2.62	4.23
1946	30.90	24.49	19.06	14.70	10.28	7.61	3.84	6.41	5.43	4.36	4.42	2.67	3.78
1947	31.07	24.28	18.81	14.57	10.26	7.76	4.07	6.79	5.46	4.25	4.30	2.50	3.69
1948	29.67	23.04	17.69	13.54	9.45	7.04	3.65	6.63	5.35	4.15	4.09	2.41	3.39
1949	29.42	22.59	17.25	13.08	9.03	6.69	3.33	6.83	5.34	4.17	4.04	2.35	3.36
1950	29.53	22.78	17.49	13.34	9.24	6.96	3.49	6.75	5.28	4.15	4.10	2.27	3.48
1953	30.91	23.77	18.26	13.95	9.73	7.31	3.60	7.14	5.52	4.31	4.22	2.42	3.72
1954	29.99	23.18	17.89	13.71	9.60	7.31	3.74	6.81	5.30	4.18	4.11	2.29	3.56
1956	31.49	24.75	19.25	14.89	10.48	7.93	3.99	6.74	5.50	4.35	4.41	2.55	3.94
1958	31.19	24.18	18.64	14.35	10.06	7.69	4.15	7.01	5.55	4.29	4.28	2.38	3.54
1960	32.45	25.25	19.50	15.02	10.53	7.99	4.14	7.21	5.75	4.48	4.49	2.54	3.85
1962	31.01	24.39	19.06	14.74	10.36	7.88	4.03	6.61	5.33	4.32	4.38	2.47	3.86
1965	30.75	24.70	19.59	15.35	10.85	8.27	4.41	6.05	5.10	4.25	4.50	2.58	3.86
1969	29.11	22.86	17.84	13.84	9.87	7.64	4.34	6.25	5.02	4.00	3.98	2.22	3.30
1972	29.52	23.13	18.06	14.03	9.89	7.47	3.99	6.39	5.07	4.02	4.14	2.42	3.48
1976	25.67	19.32	14.52	10.91	7.45	5.63	2.91	6.35	4.80	3.61	3.46	1.83	2.72
1982	25.17	19.06	14.36	10.79	7.33	5.40	2.53	6.11	4.70	3.56	3.47	1.93	2.87
1983	26.96	21.07	15.93	12.06	8.40	6.40	3.19	5.89	5.15	3.87	3.66	1.99	3.21
1984	26.57	20.95	16.23	12.23	8.60	6.62	3.51	5.62	4.72	4.00	3.63	1.99	3.10
1985	28.49	22.35	17.43	13.49	9.45	7.25	4.09	6.14	4.92	3.95	4.04	2.20	3.16
1986	28.80	22.66	17.62	13.63	9.61	7.37	3.91	6.14	5.03	4.00	4.02	2.23	3.46
1987	27.78	21.57	16.66	12.79	8.98	6.73	3.44	6.22	4.91	3.88	3.80	2.25	3.29
1988	27.77	21.70	16.85	12.92	8.95	6.80	3.60	6.07	4.86	3.93	3.97	2.15	3.21
1989	28.04	21.96	17.02	13.13	9.30	7.11	3.79	6.08	4.94	3.89	3.83	2.19	3.32
1990	27.39	20.86	15.95	12.21	8.73	6.78	3.63	6.53	4.91	3.74	3.48	1.95	3.15
1991	27.73	21.54	16.56	12.73	8.95	6.79	3.55	6.20	4.98	3.83	3.78	2.16	3.24
1992	27.23	21.18	16.34	12.66	8.99	6.88	3.72	6.06	4.84	3.68	3.67	2.12	3.16
1993	27.53	21.31	16.33	12.44	8.69	6.72	3.76	6.22	4.98	3.89	3.75	1.98	2.96
1994	28.08	21.58	16.63	12.84	9.00	6.96	3.86	6.50	4.96	3.79	3.84	2.04	3.11
1995	27.74	21.54	16.67	12.91	9.29	7.23	3.99	6.20	4.87	3.76	3.62	2.07	3.24
1996	27.68	21.45	16.51	12.71	9.08	6.98	3.84	6.23	4.94	3.80	3.63	2.10	3.15
1997	27.24	21.24	16.41	12.56	8.92	6.91	3.78	6.00	4.83	3.85	3.64	2.01	3.13
1998	27.67	21.70	16.86	13.08	9.38	7.31	3.99	5.97	4.83	3.78	3.70	2.08	3.32
1999	27.68	21.68	16.86	13.16	9.40	7.28	3.91	6.00	4.82	3.69	3.76	2.12	3.37
2000	26.43	20.79	16.27	12.73	9.06	7.00	3.90	5.64	4.51	3.55	3.67	2.06	3.11

Notes: Computations by authors based on estate tax return statistics. See Appendix Section D for details.
Series display the top of total net-worth accruing to each upper wealth group.
Series for Top 2-1% are estimated only for the 1946-2000 period because the tax return population does not cover that group in the pre-war period.

Table B2: Top Groups Wealth Levels in the United States, 1916-2000 (in thousands of 2000 dollars)

	Top groups							Intermediate Groups						Thresholds						
	2%	1%	0.50%	0.25%	0.10%	0.05%	0.01%	2-1%	1-.5%	.5-.25%	.25-.1%	.1-.05%	.05-.01%	2%	1%	0.50%	0.25%	0.10%	0.05%	0.01%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1916		1,911	3,275	5,501	10,543	16,947	48,582		547	1,049	2,140	4,139	9,038		403	773	1,487	3,274	5,536	19,602
1917		1,618	2,745	4,575	8,781	14,071	40,230		492	914	1,772	3,490	7,531		368	684	1,264	2,715	4,700	14,964
1918		1,595	2,702	4,504	8,678	13,968	41,123		488	900	1,721	3,387	7,180		364	682	1,225	2,611	4,568	13,591
1923		1,752	2,967	4,987	9,823	16,125	49,643		536	948	1,763	3,520	7,745		411	727	1,258	2,713	4,966	13,414
1920		1,486	2,501	4,156	8,046	13,129	39,781		471	846	1,563	2,964	6,466		348	663	1,123	2,318	3,917	13,185
1921		1,459	2,413	3,925	7,266	11,334	30,981		506	901	1,697	3,199	6,422		386	688	1,214	2,501	4,186	12,689
1922		1,598	2,645	4,279	7,790	11,879	28,314		551	1,012	1,939	3,701	7,770		414	764	1,379	2,869	5,058	14,498
1923		1,589	2,660	4,355	8,029	12,327	30,869		517	966	1,905	3,731	7,692		385	722	1,327	2,919	4,988	13,205
1924		1,694	2,847	4,687	8,767	13,799	37,993		540	1,008	1,967	3,734	7,751		398	761	1,374	3,020	4,675	15,048
1925		1,718	2,870	4,726	8,804	13,888	37,179		567	1,014	2,007	3,721	8,065		431	774	1,440	2,888	5,025	15,978
1926		1,734	2,936	4,827	9,084	14,396	40,757		533	1,044	1,989	3,771	7,806		383	790	1,430	2,921	5,009	14,397
1927		2,078	3,518	5,878	11,278	18,222	53,853		638	1,158	2,279	4,334	9,314		483	877	1,590	3,462	5,434	20,334
1928		2,160	3,673	6,139	11,663	18,491	52,487		647	1,208	2,456	4,835	9,992		483	902	1,683	3,716	6,477	18,018
1929		2,367	4,101	6,933	13,398	21,443	58,947		634	1,269	2,623	5,353	12,067		457	915	1,800	4,055	7,156	25,056
1930		2,285	3,910	6,615	12,959	21,216	61,043		660	1,204	2,386	4,702	11,260		498	909	1,659	3,579	6,343	24,560
1931		1,763	2,994	5,003	9,535	15,105	41,922		532	984	1,982	3,965	8,401		399	738	1,365	3,090	5,183	15,735
1932		1,297	2,196	3,609	6,706	10,507	27,540		398	783	1,544	2,905	6,249		290	570	1,089	2,298	4,008	11,400
1933		1,456	2,479	4,124	7,821	12,406	33,209		433	834	1,659	3,237	7,205		319	613	1,165	2,555	4,274	13,565
1934		1,377	2,337	3,875	7,322	11,660	32,211		416	799	1,577	2,984	6,523		306	588	1,123	2,348	4,016	11,563
1935		1,389	2,377	3,938	7,491	11,885	32,722		401	815	1,569	3,098	6,675		282	595	1,110	2,365	4,211	12,119
1936		1,640	2,816	4,740	9,182	14,687	40,021		463	893	1,779	3,678	8,354		338	660	1,229	2,750	5,013	17,301
1937		1,431	2,404	3,978	7,547	12,072	32,614		459	830	1,598	3,022	6,936		348	630	1,126	2,372	4,187	12,675
1938		1,401	2,350	3,872	7,315	11,599	31,615		452	828	1,577	3,030	6,595		336	631	1,119	2,316	4,060	13,123
1939		1,387	2,308	3,774	7,048	11,125	29,745		467	842	1,592	2,972	6,470		352	644	1,139	2,356	3,753	14,481
1940		1,347	2,220	3,596	6,620	10,305	26,433		473	845	1,579	2,935	6,273		359	647	1,138	2,289	3,961	12,631
1941		1,323	2,169	3,495	6,456	10,117	26,267		477	843	1,522	2,795	6,079		363	652	1,110	2,212	3,775	12,938
1942		1,206	1,965	3,147	5,747	8,826	20,985		447	783	1,413	2,668	5,786		343	606	1,033	2,063	3,605	10,222
1943		1,298	2,082	3,285	5,863	8,927	22,630		514	878	1,566	2,800	5,501		398	689	1,142	2,262	3,605	10,036
1944		1,492	2,383	3,747	6,673	10,118	25,220		602	1,019	1,796	3,227	6,342		468	804	1,327	2,583	4,135	11,435
1945		1,585	2,493	3,871	6,778	10,181	23,725		678	1,114	1,933	3,375	6,795		533	886	1,447	2,690	4,656	10,397
1946	1,013	1,605	2,498	3,853	6,737	9,979	25,145	420	712	1,143	1,930	3,496	6,187	328	559	937	1,458	2,824	4,197	11,098
1947	956	1,494	2,315	3,585	6,313	9,544	25,017	418	672	1,045	1,766	3,082	5,676	335	540	869	1,335	2,498	3,765	11,085
1948	895	1,390	2,134	3,267	5,702	8,493	22,003	400	645	1,001	1,644	2,911	5,115	320	519	817	1,267	2,359	3,510	8,892
1949	927	1,423	2,173	3,296	5,691	8,426	20,969	430	673	1,050	1,699	2,956	5,291	349	548	860	1,311	2,410	3,607	9,383
1950	967	1,492	2,292	3,496	6,054	9,127	22,850	442	692	1,089	1,790	2,981	5,697	360	562	889	1,379	2,440	3,819	9,552
1953	1,059	1,629	2,503	3,823	6,669	10,024	24,653	489	756	1,182	1,927	3,314	6,366	401	618	958	1,486	2,669	4,273	10,946
1954	1,065	1,647	2,541	3,894	6,818	10,380	26,596	484	753	1,188	1,945	3,255	6,326	395	613	961	1,502	2,635	4,232	11,230
1956	1,252	1,968	3,061	4,737	8,334	12,610	31,747	536	874	1,385	2,339	4,058	7,826	413	707	1,132	1,770	3,259	5,234	13,998
1958	1,257	1,949	3,004	4,625	8,109	12,388	33,429	565	894	1,383	2,302	3,830	7,128	445	728	1,130	1,762	3,138	4,859	12,902
1960	1,389	2,161	3,337	5,141	9,010	13,676	35,399	617	985	1,533	2,562	4,345	8,245	487	797	1,238	1,963	3,536	5,469	14,564
1962	1,415	2,226	3,479	5,380	9,453	14,391	36,757	604	974	1,578	2,664	4,515	8,800	477	777	1,277	2,044	3,658	5,737	15,936
1965	1,526	2,451	3,889	6,091	10,766	16,413	43,720	601	1,013	1,686	2,975	5,120	9,587	470	795	1,335	2,230	4,205	6,384	17,953
1969	1,559	2,449	3,822	5,930	10,568	16,376	46,527	670	1,075	1,714	2,839	4,760	8,838	535	863	1,388	2,182	3,921	5,940	15,623
1972	1,615	2,531	3,952	6,142	10,822	16,338	43,636	699	1,110	1,761	3,022	5,305	9,514	557	901	1,422	2,251	4,336	6,461	17,061
1976	1,264	1,902	2,859	4,297	7,337	11,075	28,621	625	945	1,420	2,271	3,599	6,689	509	795	1,170	1,789	3,028	4,501	11,384
1982	1,238	1,874	2,824	4,247	7,208	10,615	24,836	601	924	1,402	2,273	3,802	7,059	492	760	1,159	1,752	3,117	4,774	12,800
1983	1,345	2,102	3,178	4,813	8,377	12,777	31,869	587	1,027	1,543	2,436	3,978	8,004	447	802	1,279	1,828	3,537	4,950	15,910
1984	1,342	2,117	3,280	4,944	8,694	13,371	35,510	568	953	1,617	2,443	4,017	7,837	453	738	1,353	1,929	3,386	5,094	14,064
1985	1,499	2,352	3,669	5,676	9,943	15,251	42,991	646	1,035	1,662	2,832	4,635	8,316	517	837	1,314	2,173	4,014	5,528	14,344
1986	1,621	2,550	3,968	6,135	10,814	16,603	44,052	691	1,133	1,800	3,016	5,026	9,740	546	908	1,445	2,329	4,076	6,464	16,201
1987	1,617	2,511	3,879	5,953	10,458	15,675	40,023	724	1,142	1,805	2,950	5,241	9,588	589	921	1,488	2,191	4,284	6,495	16,977
1988	1,665	2,602	4,040	6,197	10,735	16,310	43,111	727	1,165	1,882	3,172	5,160	9,610	587	935	1,513	2,426	4,384	6,454	17,132
1989	1,731	2,712	4,203	6,484	11,482	17,552	46,810	750	1,220	1,923	3,152	5,412	10,238	599	975	1,583	2,427	4,337	6,716	18,732
1990	1,658	2,525	3,862	5,912	10,566	16,403	43,948	790	1,189	1,811	2,810	4,729	9,516	655	985	1,485	2,214	3,828	5,902	18,481
1991	1,657	2,574	3,958	6,087	10,699	16,230	42,412	740	1,190	1,830	3,012	5,169	9,684	594	957	1,488	2,306	4,210	6,443	17,049
1992	1,647	2,561	3,952	6,124	10,877	16,632	44,932	732	1,170	1,780	2,956	5,122	9,558	587	947	1,455	2,257	4,176	6,341	17,151
1993	1,666	2,580	3,953	6,023	10,522	16,263	45,524	753	1,206	1,883	3,023	4,782	8,948	607	969	1,537	2,365	4,060	5,721	16,305
1994	1,691	2,600	4,006	6,185	10,841	16,776	46,471	783	1,194	1,826	3,082	4,906	9,352	647	979	1,487	2,355	4,184	5,981	16,896
1995	1,709	2,655	4,109	6,364	11,451	17,811	49,150	764	1,201	1,853	2,972	5,092	9,976	620	975	1,522	2,296	4,106	6,666	16,532
1996	1,795	2,782	4,283	6,592	11,775	18,114	49,752	808	1,281	1,974	3,137	5,437	10,205	650	1,042	1,642	2,397	4,416	6,829	17,593
1997	1,880	2,933	4,531	6,937	12,315	19,083	52,167	828	1,335	2,124	3,352	5,547	10,812	663	1,073	1,722	2,644	4,545	6,979	19,146
1998	2,060	3,231	5,023	7,793	13,970	21,760	59,370	890	1,439	2,252	3,675	6,181	12,357	703	1,160	1,823	2,827	5,045	7,568	23,559
1999	2,236	3,502	5,446	8,505	15,185	23,532	63,149	969	1,558	2,387	4,052	6,839	13,627	760	1,262	1,974	3,024	5,507	8,960	25,581
2000	2,156	3,392	5,311	8,308	14,786	22,853	63,564	920	1,472	2,314	3,989	6,718	12,676	730	1,173	1,842	3,068	5,504	8,220	24,415

Notes: All amounts are reported in thousands 2000 dollars.

Computations by authors based on income tax return statistics. All details in Appendix Section D.

Series report the thresholds, and average wealth corresponding to each of the upper groups.

Table B3: Composition by Sources of Wealth and by Fractiles of Total Wealth in the United States, 1916-2000

	Top 2%						Top 1%						Top 0.5%						Top 0.25%						Top 0.1%					
	Real	Bonds	Stock	Life Ins	Other	Debts	Real	Bonds	Stock	Life Ins	Other	Debts	Real	Bonds	Stock	Life Ins	Other	Debts	Real	Bonds	Stock	Life Ins	Other	Debts	Real	Bonds	Stock	Life Ins	Other	Debts
1916													28.1	35.5	36.4	0.3	7.8	-8.1	23.6	36.5	39.1	0.3	7.2	-6.7	19.7	37.5	41.4	0.3	7.4	-6.3
1917													29.5	32.3	39.9	0.4	6.2	-8.2	24.8	32.4	44.0	0.3	5.9	-7.4	19.9	31.1	49.4	0.3	5.8	-6.5
1918													27.7	33.3	40.1	0.5	8.3	-10.0	23.9	33.5	43.5	0.4	8.1	-9.4	19.7	33.4	47.4	0.3	7.7	-8.4
1919													25.1	29.9	45.3	1.0	9.2	-10.4	21.0	30.0	48.9	0.8	8.9	-9.7	17.1	30.3	52.1	0.7	9.2	-9.4
1920													24.2	28.1	49.4	1.3	8.8	-11.7	20.1	27.5	53.7	1.1	8.4	-10.8	16.3	26.3	58.8	0.8	7.7	-10.0
1921													29.9	32.1	42.1	2.0	7.7	-13.7	26.9	32.0	45.7	1.7	8.0	-14.3	23.9	32.0	50.2	1.2	8.3	-15.6
1922													27.3	32.5	44.0	2.4	7.2	-13.6	24.3	31.8	48.6	2.1	7.3	-14.1	21.4	30.5	54.6	1.4	7.4	-15.3
1923													25.7	30.6	46.5	2.5	6.9	-12.2	22.4	29.5	51.6	2.2	6.7	-12.5	18.6	28.2	58.4	1.6	6.3	-13.1
1924													22.5	33.2	45.1	2.4	7.3	-10.6	19.4	32.8	49.1	1.8	7.3	-10.3	15.7	32.4	53.4	1.0	7.3	-9.8
1925													21.9	31.3	46.7	2.3	8.2	-10.3	19.0	30.3	50.7	1.9	8.3	-10.2	16.1	29.2	56.0	1.2	8.0	-10.4
1926																														
1927													18.7	28.5	54.7	2.4	6.4	-10.7	16.1	27.2	58.9	2.0	6.3	-10.6	13.2	25.4	64.9	1.2	6.2	-10.9
1928													17.4	24.1	58.1	2.2	7.9	-9.7	13.9	23.5	62.3	1.7	7.8	-9.2	10.8	21.5	66.4	1.3	7.7	-7.8
1929													15.6	26.6	58.9	1.6	8.1	-10.7	12.7	26.2	62.1	1.3	7.9	-10.2	10.2	25.1	65.1	1.0	8.1	-9.4
1930													15.3	29.1	58.1	2.4	7.4	-12.4	13.3	28.1	61.7	1.7	7.7	-12.5	10.7	27.2	65.1	1.5	7.8	-12.3
1931													17.5	34.4	48.3	4.0	8.0	-12.1	16.0	33.6	50.8	3.4	8.5	-12.3	13.6	32.6	54.8	2.1	9.3	-12.5
1932													19.1	38.6	42.5	5.1	16.8	-22.0	17.7	36.9	46.0	4.2	19.4	-24.2	15.2	34.9	51.0	2.5	24.3	-28.0
1933													19.4	40.4	41.9	4.9	9.2	-15.8	17.8	40.2	44.6	3.9	9.8	-16.4	16.1	39.8	48.6	2.5	11.1	-18.2
1934													17.7	38.5	46.8	4.5	9.4	-17.0	16.2	37.7	50.7	3.7	10.1	-18.3	14.1	36.2	56.9	2.5	11.3	-21.1
1935													15.8	38.7	43.8	4.3	9.4	-12.0	13.8	37.8	47.1	3.5	10.0	-12.2	10.9	36.5	52.1	2.2	11.2	-13.0
1936													14.1	36.3	50.3	2.0	6.8	-9.6	11.2	35.5	53.9	1.9	6.9	-9.3	8.1	34.6	58.4	1.4	6.9	-9.4
1937													15.8	36.3	48.9	2.1	7.4	-10.5	13.2	35.6	52.4	1.9	7.5	-10.6	10.9	35.0	56.3	1.5	7.7	-11.3
1938													15.2	35.5	45.7	3.0	9.0	-8.4	12.5	35.0	48.8	2.4	9.1	-7.8	9.0	34.8	50.6	1.9	9.4	-5.7
1939													14.9	34.1	49.3	3.2	7.1	-8.7	12.3	33.9	52.6	2.8	6.4	-8.0	9.2	34.0	56.3	2.1	5.7	-7.2
1940													16.6	34.4	45.0	3.2	9.3	-8.5	13.9	34.5	48.0	2.6	9.0	-7.9	11.4	34.5	51.7	1.9	8.1	-7.7
1941													20.9	40.6	45.3	1.3	6.2	-14.3	17.8	40.7	48.9	1.3	6.1	-14.8	14.1	41.5	52.4	1.2	5.6	-14.7
1942													20.3	35.7	49.4	1.2	6.5	-13.1	17.1	35.1	53.9	1.2	6.4	-13.7	13.6	34.1	59.4	1.1	6.1	-14.1
1943													19.4	35.1	50.2	1.4	7.9	-14.0	16.4	34.6	55.3	1.4	7.6	-15.3	13.0	34.1	61.7	1.4	7.1	-17.3
1944													15.2	31.9	46.3	3.2	9.7	-6.3	12.5	31.8	49.8	2.7	8.9	-5.8	10.5	31.5	53.6	2.2	7.2	-4.9
1945																														
1946	25.4	34.1	39.1	0.9	7.4	-6.0	22.5	32.9	42.7	0.9	7.4	-6.4	18.9	32.7	46.9	0.8	7.1	-6.5	16.0	32.7	50.4	0.7	6.5	-6.3	13.2	32.8	53.6	0.5	5.8	-5.9
1947	26.2	34.3	37.8	1.0	8.1	-6.4	23.0	32.9	41.9	0.9	8.1	-6.8	19.4	32.9	46.1	0.8	7.7	-6.8	16.1	33.2	49.5	0.7	7.0	-6.5	13.0	33.5	52.7	0.5	6.3	-5.9
1948	27.0	34.4	37.2	1.0	8.0	-6.5	23.5	32.6	41.7	1.0	8.1	-6.9	19.9	32.4	46.0	0.9	7.9	-7.0	16.5	32.5	49.7	0.7	7.3	-6.8	13.3	32.6	53.3	0.5	6.6	-6.3
1949	27.4	33.2	37.7	1.0	8.2	-6.5	24.0	31.6	42.2	1.0	8.4	-7.1	20.5	31.1	46.7	0.9	8.2	-7.2	17.5	30.9	50.4	0.7	7.8	-7.4	14.6	30.8	54.1	0.6	7.3	-7.4
1950	27.1	33.1	38.4	0.9	8.3	-6.8	23.7	31.5	42.9	0.9	8.4	-7.4	20.3	31.0	47.4	0.8	8.2	-7.7	17.6	30.8	50.9	0.7	7.9	-7.9	15.0	30.7	54.6	0.5	7.4	-8.2
1953	25.4	28.7	42.9	0.9	9.0	-6.1	21.4	27.0	48.2	0.8	8.9	-6.3	17.8	26.4	52.9	0.7	8.5	-6.3	14.4	26.2	57.0	0.6	7.9	-6.1	10.9	26.0	61.1	0.4	7.2	-5.6
1954	25.1	27.7	43.8	0.8	9.1	-5.7	21.1	25.8	49.2	0.8	9.2	-6.0	17.4	25.2	53.9	0.7	8.9	-6.0	14.4	24.5	57.7	0.6	8.5	-5.7	11.2	23.8	61.8	0.4	8.2	-5.4
1956	23.6	26.3	47.0	0.8	8.9	-5.8	19.6	24.7	52.1	0.7	8.8	-5.9	16.2	24.0	56.6	0.6	8.5	-5.9	13.3	23.5	60.3	0.5	8.2	-5.6	10.6	23.1	63.6	0.3	7.7	-5.5
1958	23.8	25.2	48.0	0.7	8.9	-5.9	19.9	23.5	53.1	0.6	8.8	-6.0	16.6	22.7	57.5	0.5	8.6	-6.0	13.8	22.3	61.2	0.4	8.2	-5.9	11.2	22.1	64.4	0.3	7.8	-5.9
1960	21.5	24.6	51.6	0.7	7.8	-5.5	17.9	22.8	56.5	0.6	7.7	-5.5	14.7	22.0	60.6	0.5	7.5	-5.3	12.1	21.4	63.9	0.4	7.3	-5.1	9.3	21.0	67.0	0.3	7.2	-4.8
1962	20.1	23.7	52.9	1.0	10.1	-6.8	17.1	21.1	57.7	1.0	10.1	-6.9	14.6	19.8	62.0	1.0	9.7	-7.1	12.8	19.0	65.7	1.1	9.0	-7.5	9.7	18.8	70.1	0.6	8.3	-7.5
1965	20.3	26.3	53.5	1.3	4.7	-4.9	17.1	23.4	58.9	1.1	4.4	-4.9	14.5	22.1	63.4	0.9	4.1	-4.9	12.4	21.3	66.8	0.7	3.8	-5.0	10.3	20.8	70.0	0.5	3.5	-5.1
1969	23.6	25.9	48.7	2.3	12.4	-10.5	19.9	22.3	53.5	1.8	12.7	-10.2	17.1	21.2	58.0	1.4	12.5	-10.2	14.4	20.3	61.5	1.1	13.1	-10.4	10.8	18.8	65.6	0.8	13.8	-9.9
1972	24.7	27.8	46.3	2.0	10.6	-9.4	21.3	24.3	51.3	1.6	10.6	-9.1	18.8	21.9	56.5	1.3	10.3	-8.7	16.2	20.5	60.3	1.0	10.4	-8.3	13.6	19.1	64.2	0.7	10.3	-7.8
1976	31.7	30.8	35.8	2.3	12.2	-10.5	28.3	27.4	40.4	1.7	12.5	-10.3	24.4	27.4	44.5	1.4	12.3	-10.1	20.0	27.4	48.2	1.1	12.7	-9.5	16.1	26.7	52.9	0.8	13.1	-9.6
1982							34.4	23.6	32.1	2.1	18.8	-11.0	31.2	22.4	35.3	1.8	19.3	-10.1	28.4	21.2	38.4	1.5	20.2	-9.7	25.0	19.9	41.7	1.2	21.2	-9.1
1983							32.0	23.6	33.0	2.5	18.6	-9.7	28.6	23.1	36.1	2.1	19.1	-9.1	25.1	22.9	41.3	1.3	18.4	-9.0	23.4	19.9	45.4	1.0	20.7	-10.4
1984							33.1	25.1	33.5	2.1	18.3	-12.1	31.7	23.8	37.6	1.7	17.8	-12.6	27.7	23.5	40.8	1.1	18.6	-11.8	24.0	21.5	45.1	1.0	20.1	-11.8
1985							27.2	24.9	37.2	2.2	17.8	-9.3	25.6	23.5	40.6	1.7	17.7	-9.1	23.3	22.4	44.2	1.4	17.3	-8.7	18.3	21.1	50.5	0.9	16.8	-7.5
1986							27.1	24.1	37.5	1.9	19.0	-9.6	24.4	22.8	41.5	1.6	19.0	-9.2	22.6	20.6	45.6	1.3	19.3	-9.4	19.2	18.7	52.1	1.1	18.3	-9.4
1987							27.8	24.9	33.5	2.3	20.5	-8.9	25.3	23.4	36.5	2.0	21.4	-8.6	23.0	21.8	40.3	1.5	22.2	-8.9	21.0	20.8	42.7	1.2	23.5	-9.2
1988							30.3	26.4	31.9	2.7	17.4	-8.7	28.0	24.9	35.4	2.6	17.6	-8.5	25.2	24.6	38.7	2.3	17.3	-8.1	23.1	22.7	42.6	2.2	17.2	-7.9
1989							30.2	25.1	29.0	2.1	22.1	-8.5	28.1	23.7	31.8	1.8	22.9	-8.3	26.2	22.2	34.1	1.4	24.0	-7.9	22.2	21.2	36.6	1.0	25.7	-6.6
1990							28.5	28.9	27.8	2.0	21.0	-8.3	26.2	28.2	30.2	1.6	21.9	-8.1	24.5	27.8	32.7	1.2	21.8	-8.1	20.7	27.1	35.4	1.0	23.7	-7.9
1991							25.8	28.5	31.8	2.1	20.1	-8.3	24.0	27.4	35.2	1.7	19.8	-8.1	21.7	26.5	38.6	1.4	19.9	-8.1	18.4	24.5	43.4	1.1	20.3	-7.8
1992							23.3	25.5	39.7	1.9	16.7	-7.1	21.4	24.3	44.2	1.5	15.7	-7.0	19.1	23.3	47.9	1.2	15.1	-6.6	15.9	22.0	52.8	0.9	13.6	-5.3
1993							20.3	26.9	39.7	2.0	17.2	-6.2	17.9	26.3	44.0	1.6	15.9	-5.8	16.0	25.9	47.5	1.4	14.6	-5.4	14.2	22.4	53.9	1.0	13.5	-5.1
1994							23.8	29.1	33.5	2.1	18.5	-7.0	21.3	29.2	37.1	1.7	17.7	-6.9	19.2	28.7	40.4	1.4	16.9	-6.5	16.9	27.9	45.7	1.2	14.9	-6.6
1995							25.7	25.4	34.6	2.0	19.0	-6.7	23.9	24.6	38.5	1.5	17.9	-6.5	22.7	23.0	42.4	1.1	16.9	-6.2	21.3	21.3	46.5	0.8	15.8	-5.7
1996	24.1	27.5	34.6	2.6	20.9	-7.2	21.9	24.5	38.6	2.0	19.6	-6.6	20.0	24.0	42.8	1.6	18.2	-6.6	18.4	22.9	46.5	1.3	17.3	-6.5	17.0	21.2	51.7	0.9	15.8	-6.7
1997	23.2	26.5	36.8	2.1	20.4	-6.8	20.9	23.8	40.5	1.8	19.4	-6.4	19.0	23.2	44.6	1.4	18.0	-6.1	17.7	22.5	47.9	1.1	16.6	-5.8	16.2	20.7	52.7	0.9	15.6	-6.0
1998	22.5	27.3	40.6	2.3	16.1	-6.4	20.3	24.6	44.5	1.9	14.9	-6.2	18.5	23.7	48.3	1.5	14.0	-6.0	16.9	22.8	51.3	1.1	13.9	-5.9	15.1	21.3	56.1	0.7	12.8	-5.9
1999	22.1	25.3	37.7	2.0	21.0	-6.2	20.0	22.9	41.5	1.4	20.1	-6.0	18.3	22.8	44.4	1.1	19.0	-5.6	17.2	22.8	47.5	0.9	17.2	-5.5	15.1	22.5	51.6	0.6	15.8	-5.6
2000	23.9	23.3	36.9	2.1	22.7	-6.8	22.5	20.8	39.9	1.6	22.0	-6.8	21.0	19.6	43.9	1.2	20.8	-6.6	19.5	20.0	46.2	0.9	20.0	-6.7	17.4	19.8	47.8	0.8	21.0	-6.8

Notes: Wealth is defined as all sources of (non-human) wealth net of debts and liabilities but excludes annuities, and claims on future pensions.
Real is defined as real estate. Bonds is the sum of federal, local, foreign, and corporate bonds. Stock is corporate stock
Cash is currency, deposits, and notes. Other is equity in unincorporated business, and miscellaneous assets
The sums of all sources less debts add up to 100%.

Table B3: Composition by Sources of Wealth and by Fractiles of Total Wealth in the United States, 1916-2000 (continued)

	Top 0.05%						Top 0.01%							Top 2-1%							Top 1-0.5%						
	Real	Bonds	Stock	Life Ins.	Other	Debts		Real	Bonds	Stock	Life Ins	Other	Debts		Real	Bonds	Stock	Life Ins	Other	Debts		Real	Bonds	Stock	Life Ins.	Other	Debts
1916	17.2	39.3	41.3	0.2	7.2	-5.2	1916	16.4	42.2	38.4	0.2	8.1	-5.2	1916							1916						
1917	17.6	30.6	52.4	0.3	5.4	-6.3	1917	13.1	28.1	58.8	0.2	5.6	-5.8	1917							1917						
1918	17.9	33.0	49.4	0.2	7.3	-7.9	1918	15.3	33.1	53.0	0.1	5.4	-6.8	1918							1918						
1919	14.8	30.0	54.6	0.5	8.6	-8.6	1919	10.8	29.6	60.3	0.2	8.7	-9.5	1919							1919						
1920	13.9	25.3	61.2	0.6	7.5	-8.5	1920	8.0	23.5	67.7	0.3	6.3	-5.8	1920							1920						
1921	22.8	32.0	52.8	0.5	8.8	-17.0	1921	15.3	36.1	51.0	0.4	5.5	-8.3	1921							1921						
1922	20.2	29.7	58.4	0.7	7.8	-16.9	1922	12.8	33.0	57.9	0.7	10.1	-14.6	1922							1922						
1923	16.5	26.1	64.5	0.9	6.2	-14.2	1923	9.8	25.9	64.0	1.1	5.5	-6.2	1923							1923						
1924	13.5	32.0	56.9	0.4	7.3	-10.0	1924	8.5	31.1	59.0	0.2	7.0	-5.9	1924							1924						
1925	14.6	28.1	59.3	0.6	8.3	-10.9	1925	11.2	26.8	58.0	0.6	9.4	-6.0	1925							1925						
1926							1926	11.3	27.6	63.0	0.5	8.5	-10.8	1926							1926						
1927	11.5	24.3	68.9	0.5	5.9	-11.1	1927	7.8	21.9	73.6	0.3	5.1	-8.7	1927							1927						
1928	9.2	20.1	68.8	1.2	7.2	-6.5	1928	6.1	16.4	74.4	1.0	7.5	-5.4	1928							1928						
1929	8.8	24.8	65.4	0.7	8.5	-8.2	1929	6.3	24.8	65.3	0.4	9.4	-6.2	1929							1929						
1930	9.3	26.4	67.8	0.8	8.3	-12.6	1930	6.2	27.2	71.6	0.4	8.2	-13.5	1930							1930						
1931	12.2	32.0	57.6	0.9	10.3	-13.0	1931	9.4	32.5	55.8	0.5	9.0	-7.2	1931							1931						
1932	13.7	32.8	55.7	1.0	29.3	-32.5	1932	9.8	44.7	44.9	0.7	9.4	-9.4	1932							1932						
1933	16.0	39.7	51.2	1.3	12.4	-20.6	1933	8.0	39.2	48.3	0.8	10.6	-7.0	1933							1933						
1934	13.4	35.1	61.8	1.3	12.7	-24.3	1934	8.4	35.7	55.2	1.2	5.7	-6.2	1934							1934						
1935	9.2	35.4	56.0	1.0	12.5	-14.1	1935	5.9	29.1	58.3	0.6	10.5	-4.3	1935							1935						
1936	6.1	33.8	61.6	1.0	7.2	-9.7	1936	5.1	34.4	59.7	0.9	5.7	-5.7	1936							1936						
1937	9.7	34.3	59.3	1.1	8.0	-12.4	1937	6.5	37.6	56.3	0.7	8.3	-9.4	1937							1937						
1938	7.6	35.6	50.7	1.5	9.6	-5.0	1938	4.6	37.2	49.7	0.8	12.1	-4.3	1938							1938						
1939	7.5	34.1	57.9	1.7	5.3	-6.5	1939	4.6	34.7	60.6	1.2	4.1	-5.2	1939							1939						
1940	10.0	34.2	53.3	1.6	8.3	-7.4	1940	6.3	35.7	54.0	1.0	9.4	-6.4	1940							1940						
1941	12.2	42.8	54.3	1.2	5.4	-15.8	1941	7.1	39.4	53.0	1.0	5.1	-5.6	1941							1941						
1942	11.7	32.7	63.8	1.1	5.7	-15.1	1942	10.7	37.2	53.8	0.9	6.6	-9.2	1942							1942						
1943	11.1	33.2	66.9	1.5	7.0	-19.7	1943	4.5	36.3	59.4	1.6	3.6	-5.4	1943							1943						
1944	9.5	32.3	55.2	1.6	6.2	-4.7	1944	6.8	33.9	57.6	1.0	4.8	-4.0	1944							1944						
1945	10.7	35.7	49.8	1.3	9.8	-7.4	1945	6.4	39.5	53.6	0.9	4.3	-4.7	1945							1945						
1946	11.5	33.0	55.3	0.4	5.3	-5.5	1946	8.4	34.7	55.9	0.2	4.7	-4.0	1946	36.5	34.2	25.4	1.1	7.4	-4.5	1946	34.9	33.4	27.9	1.2	8.6	-6.1
1947	11.0	33.9	54.4	0.4	5.8	-5.5	1947	7.9	35.2	55.2	0.2	5.7	-4.2	1947	37.8	34.8	23.2	1.1	8.0	-4.8	1947	35.5	33.0	27.3	1.3	9.6	-6.6
1948	11.2	33.3	54.9	0.4	6.1	-6.0	1948	7.7	37.0	55.6	0.2	4.8	-5.4	1948	39.0	36.2	21.7	1.0	7.4	-5.4	1948	35.5	33.1	27.5	1.3	8.9	-6.3
1949	12.9	30.9	56.3	0.5	6.9	-7.4	1949	10.5	31.6	58.9	0.3	6.1	-7.5	1949	38.8	34.5	22.8	0.9	7.6	-4.6	1949	35.4	33.1	27.7	1.3	9.1	-6.6
1950	13.5	30.7	56.7	0.4	7.1	-8.4	1950	12.5	31.4	58.9	0.2	6.7	-9.6	1950	38.7	34.5	23.0	1.0	7.7	-4.8	1950	35.0	33.0	28.3	1.3	9.2	-6.7
1953	9.1	26.2	63.1	0.3	6.7	-5.4	1953	5.3	27.9	66.5	0.2	5.4	-5.2	1953	38.7	30.9	25.3	1.0	9.4	-5.4	1953	33.2	28.8	32.8	1.2	10.5	-6.3
1954	9.6	23.2	63.9	0.4	8.1	-5.2	1954	7.0	20.9	68.1	0.2	8.5	-4.7	1954	38.8	30.6	25.6	0.9	8.9	-4.8	1954	33.8	27.9	33.3	1.1	10.1	-6.1
1956	9.1	22.9	65.5	0.3	7.6	-5.3	1956	6.9	21.7	68.6	0.1	7.7	-5.1	1956	38.1	28.7	28.3	1.0	9.2	-5.3	1956	31.7	27.2	36.2	1.1	10.0	-6.2
1958	9.9	22.0	66.1	0.2	7.7	-5.9	1958	8.3	21.6	68.1	0.1	8.0	-6.0	1958	37.2	27.6	30.5	1.0	9.2	-5.5	1958	31.0	26.2	38.2	1.0	9.8	-6.1
1960	7.3	20.7	68.9	0.2	7.2	-4.4	1960	5.0	20.8	69.9	0.1	7.5	-3.3	1960	34.2	27.6	34.2	1.0	8.4	-5.4	1960	28.6	25.7	42.7	0.9	8.3	-6.1
1962	8.7	18.6	73.6	0.7	6.5	-8.2	1962	6.3	16.0	79.6	0.3	5.4	-7.6	1962	31.0	28.7	35.0	1.1	10.4	-6.2	1962	25.9	25.6	42.4	0.9	11.3	-6.2
1965	9.1	20.6	71.7	0.4	3.4	-5.2	1965	7.9	19.4	74.4	0.2	3.4	-5.3	1965	33.8	31.6	31.2	2.4	6.0	-5.0	1965	26.9	28.5	41.7	1.8	5.6	-4.6
1969	9.7	18.0	66.8	0.7	15.0	-10.1	1969	7.3	17.5	65.9	0.4	18.4	-9.5	1969	36.9	28.5	31.1	4.0	11.1	-11.6	1969	30.1	26.2	37.5	3.2	13.4	-10.5
1972	12.0	18.2	67.6	0.5	9.3	-7.6	1972	7.4	13.8	73.7	0.3	10.3	-5.5	1972	36.9	31.0	28.0	3.6	10.8	-10.4	1972	30.3	32.9	33.1	2.7	11.4	-10.4
1976	13.9	26.1	55.8	0.6	13.4	-9.7	1976	10.6	23.1	57.9	0.3	16.2	-8.1	1976	42.0	31.9	21.8	3.9	11.4	-11.0	1976	40.0	27.3	27.9	2.8	12.9	-10.9
1982	23.0	19.9	42.0	1.1	22.8	-8.8	1982	16.0	20.2	44.5	0.5	25.6	-6.9	1982							1982	44.1	27.3	22.2	3.1	17.0	-13.7
1983	21.1	19.2	47.4	0.8	21.7	-10.4	1983	14.0	16.7	52.5	0.3	23.4	-6.8	1983							1983	42.6	25.2	23.4	3.7	16.7	-11.7
1984	22.0	20.8	47.6	0.8	20.7	-11.9	1984	17.0	17.9	54.6	0.4	22.2	-12.1	1984							1984	38.0	29.6	19.5	3.4	19.8	-10.3
1985	14.5	19.7	53.4	0.7	17.3	-5.7	1985	10.1	15.4	60.2	0.2	17.8	-3.7	1985							1985	32.9	29.6	25.3	4.0	18.4	-10.1
1986	17.5	17.5	55.8	0.8	17.6	-9.2	1986	11.7	15.5	61.7	0.3	17.8	-7.1	1986							1986	36.4	28.6	23.7	3.2	18.9	-10.7
1987	20.2	20.7	44.9	0.9	22.5	-9.2	1987	15.7	18.4	51.9	0.3	23.0	-9.4	1987							1987	36.4	29.8	23.2	3.1	17.6	-10.1
1988	22.3	21.1	45.1	2.4	16.6	-7.5	1988	21.7	18.6	49.1	0.7	16.5	-6.6	1988							1988	38.0	31.7	19.7	3.4	16.7	-9.4
1989	19.5	20.1	37.9	0.7	27.7	-5.9	1989	13.9	15.6	39.8	0.4	34.9	-4.6	1989							1989	37.6	29.7	19.3	3.3	19.1	-9.1
1990	18.7	27.7	35.4	0.7	24.4	-6.9	1990	13.8	27.9	36.8	0.3	27.3	-6.0	1990							1990	36.1	31.0	20.0	3.5	18.3	-8.9
1991	17.5	23.2	47.7	0.9	19.3	-8.5	1991	12.9	22.2	52.7	0.3	20.0	-8.1	1991							1991	31.7	32.4	20.3	3.5	21.0	-8.7
1992	13.4	21.3	57.0	0.7	12.3	-4.7	1992	9.2	17.5	64.7	0.5	12.1	-4.1	1992							1992	29.9	29.7	24.5	3.2	20.0	-7.3
1993	12.8	21.3	57.1	0.8	13.0	-5.0	1993	8.7	17.5	66.9	0.5	10.5	-4.1	1993							1993	28.2	29.1	25.4	3.2	21.5	-7.4
1994	16.5	25.0	49.4	0.9	15.0	-6.9	1994	11.7	22.3	58.4	0.6	14.7	-7.7	1994							1994	32.3	28.7	21.7	3.8	21.0	-7.4
1995	21.1	19.8	48.9	0.5	15.3	-5.6	1995	23.3	14.1	52.4	0.1	15.5	-5.3	1995							1995	31.6	28.1	21.4	3.5	22.8	-7.4
1996	15.4	20.5	55.6	0.6	14.7	-6.9	1996	12.1	20.1	61.2	0.3	13.3	-7.0	1996	31.7	26.1	21.0	4.6	25.5	-8.9	1996	28.2	26.3	24.6	3.6	24.0	-6.8
1997	14.4	19.4	56.9	0.7	14.7	-6.1	1997	10.9	16.0	62.3	0.4	14.7	-4.4	1997	31.0	26.6	23.8	3.1	23.9	-8.4	1997	27.5	25.9	26.7	3.0	24.1	-7.3
1998	14.2	20.5	58.0	0.5	12.8	-5.9	1998	11.5	20.4	62.6	0.2	12.0	-6.6	1998	30.6	26.2	26.4	3.9	20.4	-7.4	1998	26.4	27.8	31.1	3.3	18.0	-6.6
1999	13.6	20.5	55.6	0.4	15.7	-5.9	1999	9.8	19.8	60.7	0.2	15.9	-6.5	1999	29.6	24.9	24.1	3.9	24.4	-6.9	1999	26.2	23.4	31.4	2.4	23.9	-7.4
2000	16.3	19.5	49.3	0.5	21.4	-6.9	2000	12.5	17.8	52.6	0.3	23.4	-6.5	2000	29.1	23.0	25.8	3.8	25.2	-7.0	2000	27.9	25.0	25.6	3.0	26.1	-7.6

Notes: Wealth is defined as all sources of (non-human) wealth net of debts and liabilities but excludes annuities, and claims on future pensions.
Real is defined as real estate. Bonds is the sum of federal, local, foreign, and corporate bonds. Stock is corporate stock
Cash is currency, deposits, and notes. Other is equity in unincorporated business, and miscellaneous assets
The sums of all sources less debts add up to 100%.

Table B3: Composition by Sources of Wealth and by Fractiles of Total Wealth in the United States, 1916-2000 (continued)

	Top 0.5-0.25%						Top 0.25-0.1%						Top 0.1-0.05%						Top 0.05-0.01%						Top 0.01%					
	Real	Bonds	Stock	Life Ins.	Other	Debts		Real	Bonds	Stock	Life Ins.	Other	Debts		Real	Bonds	Stock	Life Ins.	Other	Debts		Real	Bonds	Stock	Life Ins.	Other	Debts		Real	Bonds	Stock	Life Ins.	Other	Debts
1916	51.7	30.5	22.3	0.6	10.4	-15.5	1916	36.5	33.1	31.4	0.4	6.9	-8.3	1916	30.2	30.2	41.8	0.6	8.1	-10.9	1916	18.2	35.4	45.2	0.2	6.0	-5.1	1916	16.4	42.2	38.4	0.2	8.1	-5.2
1917	52.9	32.0	19.7	0.4	7.7	-12.7	1917	40.9	36.7	26.0	0.4	6.1	-10.1	1917	29.0	32.9	37.5	0.6	7.5	-7.4	1917	23.7	34.0	43.8	0.3	5.0	-6.9	1917	13.1	28.1	58.8	0.2	5.6	-5.8
1918	47.1	32.2	23.1	0.9	9.3	-12.6	1918	37.8	34.1	30.6	0.9	9.4	-12.7	1918	27.3	34.8	39.0	0.5	9.2	-10.8	1918	21.6	33.0	44.3	0.4	10.0	-9.3	1918	15.3	33.1	53.0	0.1	5.4	-6.8
1919	46.7	29.6	26.1	1.6	10.4	-14.4	1919	35.2	28.9	37.0	1.3	8.0	-10.4	1919	27.7	31.8	40.8	1.4	11.6	-13.3	1919	21.3	30.6	45.6	1.1	8.5	-7.1	1919	10.8	29.6	60.3	0.2	8.7	-9.5
1920	44.1	31.1	28.2	2.2	10.8	-16.4	1920	33.3	31.4	36.2	2.2	10.6	-13.7	1920	26.9	30.9	48.2	1.7	8.8	-16.4	1920	22.9	28.1	51.2	1.1	9.3	-12.6	1920	8.0	23.5	67.7	0.3	6.3	-5.8
1921	42.6	32.5	26.1	3.3	6.5	-10.9	1921	35.7	31.9	33.0	3.2	7.0	-10.8	1921	27.6	32.0	40.8	3.4	6.8	-10.5	1921	31.8	27.1	55.1	0.7	12.7	-27.5	1921	15.3	36.1	51.0	0.4	5.5	-8.3
1922	40.2	35.6	24.3	4.0	7.1	-11.2	1922	32.0	35.4	32.6	3.9	7.0	-10.8	1922	25.3	33.1	42.5	3.4	6.1	-10.4	1922	27.0	26.6	58.9	0.8	5.7	-19.0	1922	12.8	33.0	57.9	0.7	10.1	-14.6
1923	40.7	35.1	23.5	3.9	7.8	-11.1	1923	32.9	33.5	32.5	4.1	8.0	-10.9	1923	25.7	35.0	38.5	3.7	6.6	-9.3	1923	23.2	26.3	65.0	0.8	6.9	-22.3	1923	9.8	25.9	64.0	1.1	5.5	-6.2
1924	36.8	35.0	26.8	5.5	7.7	-11.7	1924	30.4	34.1	36.2	4.0	7.2	-11.8	1924	24.1	33.8	40.8	3.5	7.1	-9.2	1924	19.5	33.1	54.2	0.5	7.7	-15.1	1924	8.5	31.1	59.0	0.2	7.0	-5.9
1925	35.0	36.1	27.6	4.3	7.8	-10.9	1925	27.6	33.4	35.4	3.8	9.4	-9.6	1925	21.8	33.4	43.5	3.3	6.5	-8.6	1925	18.4	29.5	60.8	0.7	7.2	-16.5	1925	11.2	26.8	58.0	0.6	9.4	-6.0
1926							1926							1926							1926							1926	11.3	27.6	63.0	0.5	8.5	-10.8
1927	31.9	34.8	33.3	4.5	6.9	-11.4	1927	25.9	33.2	39.1	4.8	6.8	-9.8	1927	20.0	30.4	48.1	4.0	7.4	-9.9	1927	16.9	27.6	62.2	0.9	7.1	-14.6	1927	7.8	21.9	73.6	0.3	5.1	-8.7
1928	34.9	27.3	36.7	4.6	8.5	-12.0	1928	23.7	29.9	49.2	2.7	8.2	-13.7	1928	16.9	27.0	57.4	1.7	9.4	-12.6	1928	13.2	25.0	61.4	1.5	6.8	-7.9	1928	6.1	16.4	74.4	1.0	7.5	-5.4
1929	31.0	28.4	41.5	3.4	9.1	-13.4	1929	21.4	30.2	51.8	2.5	7.0	-12.9	1929	15.7	26.3	63.9	1.9	6.7	-14.5	1929	11.8	24.8	65.4	1.1	7.4	-10.5	1929	6.3	24.8	65.3	0.4	9.4	-6.2
1930	26.4	35.0	38.6	6.2	5.8	-11.9	1930	23.0	31.2	49.2	2.5	7.3	-13.2	1930	16.9	30.8	52.8	4.9	5.8	-11.3	1930	13.5	25.3	62.8	1.3	8.4	-11.3	1930	6.2	27.2	71.6	0.4	8.2	-13.5
1931	25.4	38.2	35.4	6.8	5.7	-11.4	1931	23.6	36.8	37.8	7.4	5.8	-11.5	1931	18.7	35.3	44.2	6.8	5.5	-10.5	1931	15.7	31.3	59.9	1.5	12.0	-20.3	1931	9.4	32.5	55.8	0.5	9.0	-7.2
1932	25.6	46.0	26.7	9.1	4.8	-12.2	1932	24.8	42.7	31.3	9.2	5.3	-13.2	1932	20.7	42.7	34.1	7.9	6.2	-11.5	1932	18.0	19.7	67.5	1.4	51.3	-57.9	1932	9.8	44.7	44.9	0.7	9.4	-9.4
1933	27.4	41.3	28.4	9.7	6.0	-12.8	1933	23.1	41.3	32.1	8.2	6.0	-10.8	1933	16.7	40.3	38.6	7.5	5.9	-9.1	1933	25.1	40.3	54.5	1.8	14.5	-36.2	1933	8.0	39.2	48.3	0.8	10.6	-7.0
1934	25.4	42.8	28.0	8.3	6.3	-10.8	1934	22.5	42.1	31.5	7.5	6.1	-9.6	1934	17.0	40.5	37.9	7.0	6.2	-8.5	1934	19.5	34.4	70.0	1.5	21.3	-46.8	1934	8.4	35.7	55.2	1.2	5.7	-6.2
1935	25.4	42.9	28.0	8.3	6.2	-10.8	1935	22.9	42.2	31.0	7.6	6.1	-9.7	1935	17.4	40.7	37.4	7.0	6.2	-8.7	1935	13.3	43.1	53.2	1.5	15.0	-26.1	1935	5.9	29.1	58.3	0.6	10.5	-4.3
1936	29.4	40.5	31.5	3.0	6.6	-11.0	1936	22.1	38.3	38.3	3.3	6.8	-8.9	1936	15.8	37.9	45.7	3.3	5.7	-8.5	1936	7.4	33.2	63.8	1.0	9.0	-14.4	1936	5.1	34.4	59.7	0.9	5.7	-5.7
1937	28.0	39.8	32.3	2.9	7.1	-10.1	1937	20.5	37.6	40.2	3.4	6.9	-8.5	1937	15.8	37.9	44.2	2.9	6.3	-7.1	1937	13.5	30.3	62.9	1.5	7.6	-15.9	1937	6.5	37.6	56.3	0.7	8.3	-9.4
1938	27.7	37.7	31.3	5.3	8.8	-10.8	1938	23.4	35.7	43.1	4.1	8.1	-14.3	1938	14.6	31.7	50.3	3.4	8.5	-8.5	1938	11.1	33.8	51.9	2.4	6.7	-5.9	1938	4.6	37.2	49.7	0.8	12.1	-4.3
1939	26.5	35.3	34.4	5.3	10.3	-11.8	1939	21.7	33.5	41.7	4.8	8.6	-10.3	1939	15.5	33.6	50.0	3.5	7.2	-9.9	1939	10.8	33.5	54.9	2.3	6.6	-8.0	1939	4.6	34.7	60.6	1.2	4.1	-5.2
1940	28.5	33.8	32.4	5.8	10.3	-10.7	1940	20.7	34.4	37.6	4.4	11.7	-8.7	1940	16.5	35.6	46.1	3.0	7.4	-8.6	1940	13.9	32.7	52.6	2.2	7.0	-8.4	1940	6.3	35.7	54.0	1.0	9.4	-6.4
1941	33.7	40.6	30.4	1.2	6.6	-12.4	1941	28.5	38.4	39.1	1.6	7.6	-15.0	1941	20.7	36.7	45.7	1.2	6.3	-10.6	1941	17.7	46.5	55.6	1.4	5.6	-26.9	1941	7.1	39.4	53.0	1.0	5.1	-5.6
1942	33.2	38.4	31.1	1.4	6.9	-11.0	1942	26.7	37.8	39.1	1.5	7.5	-12.5	1942	19.8	38.4	44.6	1.1	7.1	-11.0	1942	12.6	28.7	72.9	1.2	5.0	-20.3	1942	10.7	37.2	53.8	0.9	6.6	-9.2
1943	30.6	36.9	31.2	1.4	8.8	-9.0	1943	24.8	35.9	39.3	1.3	8.9	-10.2	1943	18.8	36.9	45.3	1.1	7.6	-9.7	1943	17.9	30.1	74.5	1.5	10.4	-34.5	1943	4.5	36.3	59.4	1.6	3.6	-5.4
1944	24.9	32.3	33.6	4.9	12.7	-8.3	1944	17.4	32.6	40.4	4.0	13.4	-7.9	1944	13.8	28.7	48.8	4.0	10.3	-5.6	1944	12.2	30.8	52.8	2.2	7.5	-5.4	1944	6.8	33.9	57.6	1.0	4.8	-4.0
1945							1945							1945							1945	14.4	32.4	46.6	1.6	14.7	-9.7	1945	6.4	39.5	53.6	0.9	4.3	-4.7
1946	28.9	32.8	35.2	1.2	8.9	-7.0	1946	22.4	32.4	43.1	1.1	8.2	-7.1	1946	18.3	32.1	48.7	0.8	7.4	-7.2	1946	14.6	31.4	54.6	0.6	5.9	-7.0	1946	8.4	34.7	55.9	0.2	4.7	-4.0
1947	30.6	32.0	34.4	1.4	9.8	-8.1	1947	23.6	32.4	41.9	1.1	8.8	-7.8	1947	19.1	32.1	47.5	0.9	7.7	-7.2	1947	14.4	32.5	53.4	0.6	6.0	-6.9	1947	7.9	35.2	55.2	0.2	5.7	-4.2
1948	30.8	32.3	33.7	1.3	9.8	-7.9	1948	24.0	32.2	41.6	1.1	8.9	-7.7	1948	19.3	30.5	48.5	1.0	8.1	-7.4	1948	15.0	29.4	54.1	0.6	7.5	-6.6	1948	7.7	37.0	55.6	0.2	4.8	-5.4
1949	29.7	31.7	35.0	1.2	9.2	-6.9	1949	24.0	31.1	42.2	1.1	9.0	-7.4	1949	19.6	30.7	47.6	0.9	8.5	-7.3	1949	15.2	30.1	53.8	0.7	7.6	-7.3	1949	10.5	31.6	58.9	0.3	6.1	-7.5
1950	29.0	31.6	35.9	1.2	9.2	-6.9	1950	23.4	31.1	42.8	1.1	9.0	-7.4	1950	19.4	30.6	48.0	0.9	8.4	-7.3	1950	14.6	30.0	54.5	0.6	7.5	-7.2	1950	12.5	31.4	58.9	0.2	6.7	-9.6
1953	28.9	27.3	39.5	1.1	10.3	-7.1	1953	22.5	26.6	47.6	0.9	9.6	-7.1	1953	16.5	25.5	55.2	0.7	8.5	-6.3	1953	12.8	24.4	59.9	0.5	8.1	-5.6	1953	5.3	27.9	66.5	0.2	5.4	-5.2
1954	27.2	27.3	41.3	1.1	10.1	-6.9	1954	21.7	26.4	48.1	0.9	9.4	-6.4	1954	16.2	25.4	55.2	0.7	8.5	-6.1	1954	12.4	25.7	59.4	0.5	7.6	-5.7	1954	7.0	20.9	68.1	0.2	8.5	-4.7
1956	26.1	25.7	44.2	1.0	9.7	-6.6	1956	19.7	24.3	52.2	0.7	9.2	-6.1	1956	15.4	23.9	57.8	0.6	8.2	-5.9	1956	11.3	24.0	62.4	0.4	7.4	-5.5	1956	6.9	21.7	68.6	0.1	7.7	-5.1
1958	26.0	24.3	45.3	0.9	9.7	-6.2	1958	19.8	22.6	53.7	0.7	9.3	-6.0	1958	15.7	22.6	58.9	0.6	8.0	-5.8	1958	11.8	22.5	63.8	0.4	7.4	-5.8	1958	8.3	21.6	68.1	0.1	8.0	-6.0
1960	23.7	23.9	49.6	0.8	8.1	-6.0	1960	18.6	22.5	56.7	0.6	7.5	-5.8	1960	15.6	21.8	60.7	0.5	7.4	-6.0	1960	9.8	20.7	67.9	0.3	6.8	-5.5	1960	5.0	20.8	69.9	0.1	7.5	-3.3
1962	20.9	22.7	49.4	0.6	12.2	-5.7	1962	20.1	19.5	55.3	2.1	10.8	-7.7	1962	13.1	19.4	58.7	0.3	13.7	-5.2	1962	11.2	21.3	67.4	1.2	7.7	-8.8	1962	6.3	16.0	79.6	0.3	5.4	-7.6
1965	22.0	24.9	50.9	1.5	5.3	-4.6	1965	17.5	22.5	59.1	1.1	4.5	-4.7	1965	14.1	21.4	64.8	0.9	3.7	-4.8	1965	10.4	21.9	68.6	0.6	3.5	-5.0	1965	7.9	19.4	74.4	0.2	3.4	-5.3
1969	26.3	24.4	45.9	2.5	10.2	-9.3	1969	23.3	23.9	51.4	1.7	11.5	-11.8	1969	14.7	21.6	61.5	1.4	9.9	-9.1	1969	12.8	18.6	68.0	1.0	10.4	-10.9	1969	7.3	17.5	65.9	0.4	18.4	-9.5
1972	27.8	26.6	43.2	2.3	10.3	-10.3	1972	22.3	23.9	51.0	1.7	10.4	-9.4	1972	18.4	21.8	53.7	1.2	13.5	-8.6	1972	17.3	23.2	60.5	0.8	8.2	-9.9	1972	7.4	13.8	73.7	0.3	10.3	-5.5
1976	37.7	27.4	33.4	2.2	11.1	-11.8	1976	28.4	28.9	38.1	1.8	12.0	-9.2	1976	23.1	28.5	44.2	1.4	12.2	-9.4	1976	17.4	29.4	53.5	1.0	10.3	-11.5	1976	10.6	23.1	57.9	0.3	16.2	-8.1
1982	39.6	26.3	26.1	2.6	16.5	-11.2	1982	35.7	23.9	31.3	2.0	18.2	-11.1	1982	30.5	19.7	41.1	1.7	16.7	-9.8	1982	29.2	19.6	39.7	1.5	20.4	-10.5	1982	16.0	20.2	44.5	0.5	25.6	-6.9
1983	39.8	23.7	20.0	4.5	21.5	-9.5	1983	28.9	30.0	31.9	1.9	13.1	-5.8	1983	30.7	21.9	38.8	1.7	17.4	-10.6	1983	28.3	21.8	42.4	1.4	20.1	-13.9	1983	14.0	16.7	52.5	0.3	23.4	-6.8
1984	44.0	24.5	27.8	3.3	15.4	-15.1	1984	36.3	28.2	30.7	1.5	15.2	-11.9	1984	30.8	24.1	36.6	1.7	18.1	-11.3	1984	27.7	24.0	39.8	1.2	19.0	-11.6	1984	17.0	17.9	54.6	0.4	22.2	-12.1
1985	33.2	27.3	28.1	3.0	19.1	-10.7	1985	35.2	25.7	29.6	2.3	18.4	-11.3	1985	30.7	25.4	40.8	1.8	15.0	-13.6	1985	20.1	25.3	44.7	1.2	16.8	-8.1	1985	10.1	15.4	60.2	0.2	17.8	-3.7
1986	30.8	30.1	27.5	2.3	17.8	-8.7	1986	30.5	25.1	30.1	2.0	21.6	-9.4	1986	24.8	23.0	39.9	2.0	20.6	-10.3	1986	24.1	19.6	49.0	1.3	17.5	-11.5	1986	11.7	15.5	61.7	0.3	17.8	-7.1
1987	32.8	28.6	23.9	3.7	18.5	-7.5	1987	27.8	24.3	34.6	2.4	19.1	-8.2	1987	23.4	20.9	36.2	2.0	26.6	-9.1	1987	24.8	23.2	37.6	1.4	22.1	-9.1	1987	15.7	18.4	51.9	0.3	23.0	-9.4
1988	37.3	26.1	24.4	3.4	18.6	-9.7	1988	30.2	28.8	29.9	2.4	17.4	-8.6	1988	25.5	27.7	35.0	1.8	19.3	-9.3	1988	23.0	23.9	40.5	4.3	16.7	-8.4	1988	21.7	18.6	49.1	0.7	16.5	-6.6
1989	34.4	29.0	24.0	3.0	19.4	-9.8	1989	36.0	24.6	27.9	2.5	19.9	-10.9	1989	30.9	24.8	32.3	1.9	19.3	-9.1	1989	25.9	25.2	35.9	1.0	19.3	-7.3	1989	13.9	15.6	39.8	0.4	34.9	-4.6
1990	31.9	29.5	22.0	2.8	21.9	-8.2	1990	33.9	29.6	26.1	1.9	17.2	-8.8	1990	27.7	25.2	35.3	1.8	21.2	-11.2	1990	24.4	27.4	33.9	1.3	21.0	-8.0	1990	13.8	27.9	36.8	0.3	27.3	-6.0
1991	31.7	30.3	23.8	2.8	19.6	-8.2	1991	29.5	31.2	27.3	2.0	18.7	-8.8	1991	21.1	28.8	30.0	1.9	23.7	-5.5	1991	22.6	24.2	42.2	1.5	18.5	-8.9	1991	12.9	22.2	52.7	0.3	20.0	-8.1
1992	29.1	27.6	31.6	2.6	17.9	-8.7	1992	27.0	26.4	35.7	1.9	18.6	-9.6	1992	24.0	24.5	39.2	1.7	18.0	-7.4	1992	18.3	25.7	48.0	0.8	12.6	-5.4	1992	9.2	17.5	64.7	0.5	12.1	-4.1
1993	24.1	27.5	32.9	2.3	20.2	-6.9	1993	20.1	34.1	32.6	2.3	17.1	-6.2	1993	19.2	26.0	43.0	1.8	15.5	-5.4	1993	17.9	26.1	44.7	1.2	16.1	-6.0	1993	8.7	17.5	66.9	0.5	10.5	-4.1
1994	28.3	31.1	25.7	2.4	20.5	-8.0	1994	24.4	30.6	27.9	2.0	21.4	-6.3	1994	18.4	37.6	33.1	2.1	14.5	-5.7	1994	22.4	28.4	38.3	1.3	15.4	-5.9	1994	11.7	22.3	58.4	0.6	14.7	-7.7
1995	28.0	30.2	25.0	2.9	21.2	-7.3	1995	26.5	27.3	32.0	2.1	19.7	-7.6	1995	22.0	26.9	38.1	1.6	17.5	-6.1	1995	18.4	26.8	44.5	1.0	15.1	-5.8	1995	23.3	14.1	52.4	0.1	15.5	-5.3
1996	25.2	27.6	30.5	2.3	21.4	-6.9	1996	22.1	27.2	33.5	2.2	21.0	-6.1	1996	22.2	23.5	38.6	1.9	19.5	-5.8	1996	19.5	21.1	48.7	1.0	16.5	-6.8	1996	12.1	20.1	61.2	0.3	13.3	-7.0
1997	23.4	25.4	33.6	2.3	22.4	-7.1	1997	21.3	26.9	36.1	1.8	19.1	-5.2	1997	22.2	25.1	38.3	1.6	18.7	-5.9	1997	18.7	23.5	50.3	1.0	14.6	-8.1	1997	10.9	16.0	62.3	0.4	14.7	-4.4
1998	24.1	26.9	37.8	3.1	14.5	-6.4	1998	21.4	26.6	39.2	2.0	16.6	-5.8	1998	18.2	24.2	49.4	1.5	12.8	-6.1	1998	17.4	20.6	52.5	0.8	13.8	-5.0	1998	11.5	20.4	62.6	0.2	12.0	-6.6
1999	21.9	22.9	33.5	2.1	25.4	-5.8	1999	22.6	23.5	37.0	1.6	20.6	-5.3	1999	20.3	29.3	38.1	1.0	16.0	-4.8	1999	17.9	21.3	49.6	0.7	15.6	-5.1	1999	9.8	19.8	60.7	0.2	15.9	-6.5
2000	26.7	18.1	35.5	2.3	23.7	-6.4	2000	24.6	20.7	42.4	1.1	17.5	-6.4	2000	21.1	20.7	42.7	2.0	19.7	-6.2	2000	21.0	21.5	45.1	0.8	18.9	-7.4	2000	12.5	17.8	52.6	0.3	23.4	-6.5

Notes: Wealth is defined as all sources of (non-human) wealth net of debts and liabilities but excludes annuities, and claims on future pensions.
Real is defined as real estate. Bonds is the sum of federal, local, foreign, and corporate bonds. Stock is corporate stock
Cash is currency, deposits, and notes. Other is equity in unincorporated business, and miscellaneous assets
The sums of all sources less debts add up to 100%.

Table B4: Gender, Age, and Marital Status and by Fractiles of Total Wealth in the United States, 1916-2000

	Top 2%						Top 1%						Top 0.5%						Top 0.25%						Top 0.1%					
		Female			Male			Female			Male			Female			Male			Female			Male			Female			Male	
	Age	Female	Married	Widow	Married	Widower	Age	Female	Married	Widow	Married	Widower	Age	Female	Married	Widow	Married	Widower	Age	Female	Married	Widow	Married	Widower	Age	Female	Married	Widow	Married	Widower
1916							1916						1916	25					1916	25					1916	25				
1917							1917						1917	27					1917	29					1917	30				
1918							1918						1918	27					1918	27					1918	27				
1919							1919	54	21				1919	56	25				1919	56	25				1919	56	25			
1920							1920	54	20				1920	55	23				1920	55	23				1920	56	25			
1921							1921	54	20				1921	55	24				1921	56	25				1921	57	26			
1922							1922	54	22				1922	55	26				1922	55	25				1922	56	24			
1923							1923	54	23				1923	56	28				1923	56	27				1923	56	29			
1924							1924	54	23				1924	56	27				1924	56	27				1924	56	27			
1925							1925	54	24	36	40	72	10	1925	56	26	38	42	73	10	1925	56	25	39	42	74	10	1925	57	25	41	43	73	10
1926							1926	54	24	40	41	72	12	1926	56	27	39	42	74	11	1926	57	27	41	44	75	9	1926	58	25	45	41	74	10
1927							1927							1927	55	25	43	40	78	10	1927	56	27	43	41	76	10	1927	56	27	43	42	74	11
1928							1928							1928	55	24	40	42	77	10	1928	56	26	40	44	76	10	1928	56	23	40	49	76	10
1929							1929							1929	55	27	40	41	76	10	1929	56	29	38	43	77	10	1929	56	26	42	43	75	12
1930							1930							1930	55	25	41	39	79	8	1930	56	29	43	40	78	8	1930	57	29	48	39	80	9
1931							1931							1931	55	23	43	41	80	8	1931	57	32	37	43	76	10	1931	58	31	40	45	76	10
1932							1932							1932	56	30	40	42	73	11	1932	56	31	37	44	74	11	1932	57	32	39	44	76	10
1933							1933							1933	56	32	38	45	73	11	1933	57	33	37	46	74	12	1933	57	30	36	47	70	12
1934							1934							1934	57	34	40	42	72	11	1934	57	35	40	41	71	11	1934	58	35	40	43	71	11
1935							1935							1935	57	37	37	43	70	12	1935	57	38	38	43	71	11	1935	58	35	35	46	73	11
1936							1936	55	26	39	41	73	11	1936	57	34	35	45	72	11	1936	57	34	38	44	73	12	1936	58	34	43	42	74	11
1937							1937	55	29	39	41	73	11	1937	58	37	38	42	72	11	1937	58	37	39	42	74	11	1937	58	36	41	41	71	10
1938							1938	55	27	40	39	75	9	1938	58	35	36	43	72	11	1938	58	34	37	43	73	10	1938	58	35	37	40	68	11
1939							1939	55	28	39	42	73	10	1939	58	36	38	44	70	11	1939	58	35	39	44	71	11	1939	58	35	40	40	70	12
1940							1940	56	29	39	39	75	10	1940	58	36	37	42	73	10	1940	58	37	37	41	75	10	1940	59	38	37	42	76	10
1941							1941	56	31	37	42	74	10	1941	58	37	35	44	74	10	1941	58	37	40	43	74	10	1941	58	38	39	43	73	11
1942							1942	55	31	40	41	75	9	1942	57	37	37	43	72	10	1942	57	38	36	43	71	10	1942	57	37	37	45	71	9
1943							1943	54	24	44	38	77	8	1943	56	33	39	41	74	8	1943	56	34	37	41	74	9	1943	56	34	40	42	70	9
1944	53	20	49	34	79	6	1944	53	26	39	40	73	8	1944	54	31	40	40	73	8	1944	55	34	41	39	72	8	1944	55	32	40	42	73	8
1945	52	21	41	39	78	7	1945	54	29	39	40	77	8	1945	55	32	41	40	76	8	1945	55	32	42	40	76	7	1945	56	34	48	37	77	8
1946							1946							1946							1946							1946						
1947							1947							1947							1947							1947						
1948	54	32					1948	54	31					1948	55	36					1948	55	26					1948	56	28				
1949	55	31					1949	54	31					1949	55	36					1949	56	25					1949	57	29				
1950	55	32					1950	54	31					1950	55	36					1950	56	27					1950	57	29				
1953	55	32					1953	55	31					1953	55	37					1953	55	29					1953	57	33				
1954							1954							1954							1954							1954						
1956							1956							1956							1956							1956						
1958	55	30					1958	55	32					1958	56	38					1958	57	32					1958	58	35				
1960							1960							1960							1960							1960						
1962	58	40	43	40	83	7	1962	59	40	44	40	82	7	1962	59	41	45	39	82	7	1962	59	42	48	36	81	7	1962	60	44	53	35	84	6
1965		41					1965		43					1965		42					1965		42					1965		44				
1969	59	43	38	40	82	7	1969	59	42	42	41	83	7	1969	60	41	44	39	83	7	1969	60	41	48	38	82	7	1969	60	44	46	37	84	8
1972	58	44	39	45	77	8	1972	57	44	37	43	77	8	1972	58	44	40	39	80	8	1972	58	46	40	37	82	8	1972	56	47	38	37	81	7
1976	59	40	36	45	82	6	1976	59	39	38	43	80	7	1976	61	42	37	45	82	7	1976	60	42	40	44	83	7	1976	61	41	43	43	82	7
1982	57	41	44	38	80	8	1982	59	43	47	37	81	7	1982	59	42	48	36	81	7	1982	60	40	50	36	81	6	1982	60	38	51	34	85	5
1983	58	39	42	39	82	7	1983	59	37	52	36	86	7	1983	60	36	51	35	88	6	1983	61	37	47	42	86	5	1983	59	34	61	23	90	3
1984	57	36	64	23	67	9	1984	60	43	58	25	73	9	1984	59	48	64	24	81	6	1984	60	46	66	26	80	7	1984	62	39	51	44	86	8
1985	54	31	44	34	72	8	1985	59	40	46	31	74	6	1985	59	40	45	33	79	6	1985	59	42	50	31	80	7	1985	60	43	46	34	84	7
1986	54	36	47	37	69	8	1986	59	45	49	36	74	8	1986	58	43	49	33	75	6	1986	58	41	53	30	78	5	1986	59	35	53	29	82	4
1987	54	30	43	42	67	9	1987	59	42	49	36	75	7	1987	59	37	54	34	79	6	1987	59	32	59	32	81	5	1987	58	36	63	28	82	4
1988	54	35	43	34	69	9	1988	59	47	44	35	74	6	1988	58	42	47	30	77	5	1988	58	38	47	29	77	5	1988	61	37	53	30	82	6
1989	55	38	50	33	68	7	1989	59	44	52	31	73	7	1989	58	42	55	29	73	6	1989	59	41	60	28	76	6	1989	60	40	61	27	78	5
1990	56	40	49	33	71	7	1990	59	47	52	34	73	7	1990	58	45	54	30	73	7	1990	59	48	59	27	75	7	1990	61	44	58	32	76	7
1991	55	37	42	35	67	8	1991	58	45	45	30	73	8	1991	58	43	47	30	72	6	1991	57	42	46	32	73	5	1991	57	40	48	29	79	5
1992	55	39	44	32	66	6	1992	58	44	46	32	68	6	1992	58	42	47	31	73	6	1992	59	41	49	31	75	6	1992	58	41	46	33	74	6
1993	55	43	47	33	68	8	1993	57	47	47	30	72	6	1993	56	44	46	31	73	6	1993	56	43	46	27	75	5	1993	59	38	51	31	74	6
1994	56	43	47	26	68	7	1994	57	46	50	28	69	6	1994	57	43	52	29	68	5	1994	56	42	45	30	70	5	1994	56	40	43	33	73	6
1995	57	44	49	30	69	7	1995	59	46	50	28	72	7	1995	58	46	48	27	76	7	1995	59	44	49	29	77	6	1995	59	42	49	28	78	6
1996	59	45	51	29	67	7	1996	58	44	52	29	69	6	1996	57	41	50	27	68	6	1996	60	40	48	29	75	6	1996	59	38	50	29	77	5
1997	59	47	46	31	68	7	1997	58	44	48	29	70	6	1997	57	43	48	28	70	5	1997	58	47	46	25	79	6	1997	62	40	54	32	78	7
1998	60	48	48	30	70	8	1998	59	44	49	27	69	7	1998	58	44	49	27	72	6	1998	58	42	48	28	72	7	1998	60	45	48	26	79	6
1999	59	50	46	33	69	8	1999	58	46	47	31	68	6	1999	57	45	50	24	69	5	1999	57	42	54	28	67	6	1999	56	38	54	29	68	5
2000	59	50	41	30	65	8	2000	59	44	40	23	67	5	2000	60	39	54	29	68	7	2000	59	41	56	26	71	6	2000	60	36	55	31	76	7

Notes: The Table reports the average age, the percent female, the fraction married (among females), the fraction widowed (among females), the fraction married (among males), the fraction widowed (among males) for each wealth fractile.

Table B4: Gender, Age, and Marital Status and by Fractiles of Total Wealth in the United States, 1916-2000 (continued)

	Top 0.05%						Top 0.01%						Top 2-1%						Top 1-0.5%					
		Female			Male			Female			Male			Female			Male			Female			Male	
	Age	Female	Married	Widowed	Married	Widowed	Age	Female	Married	Widowed	Married	Widowed	Age	Female	Married	Widowed	Married	Widowed	Age	Female	Married	Widowed	Married	Widowed
1916		25						25																
1917		30						25																
1918		26						23																
1919	55	26					58	16											53	17				
1920	57	24					56	26											52	17				
1921	57	25					55	40											53	16				
1922	56	23					58	20											53	18				
1923	57	29					57	33											52	18				
1924	57	28					52	35											53	20				
1925	58	28	41	42	70	11	58	24	59	38	66	11							53	22	33	39	71	10
1926	59	22	45	45	74	10	61	21	51	43	72	9							53	21	41	40	71	13
1927	57	26	51	35	74	12	57	20	35	45	72	10												
1928	56	21	40	48	76	9	59	21	41	46	87	7												
1929	56	25	42	46	75	12	54	24	62	29	73	8												
1930	57	25	48	41	81	8	56	26	56	31	76	9												
1931	59	30	35	46	75	11	59	26	36	35	69	10												
1932	57	31	35	48	74	9	59	35	35	44	75	9												
1933	58	28	35	47	70	12	56	24	41	35	68	8												
1934	60	35	40	45	73	11	61	31	42	39	61	13												
1935	59	32	38	48	73	12	59	27	29	55	67	10												
1936	56	34	44	41	74	11	57	32	50	38	69	13							54	18	43	37	75	10
1937	58	35	34	47	71	10	57	33	34	38	73	7							53	22	40	40	73	10
1938	58	35	42	39	64	10	56	35	46	37	60	7							53	19	44	36	78	8
1939	58	35	34	43	70	12	53	31	39	49	60	9							53	21	40	39	76	9
1940	59	40	40	41	77	11	58	37	42	37	79	11							54	22	41	37	76	9
1941	59	37	41	45	75	12	59	39	58	35	76	14							54	26	39	40	74	10
1942	57	41	43	40	67	11	56	48	49	36	70	18							54	24	43	40	78	9
1943	56	38	41	41	69	8	53	26	36	51	61	7							52	16	49	35	80	7
1944	57	33	37	44	71	10	58	32	28	41	63	8	54	15	59	29	85	4	51	21	37	39	73	9
1945	56	37	53	31	78	8	59	42	57	36	80	10	50	13	43	38	78	7	53	27	37	40	78	8
1946																								
1947																								
1948	57	30					61	26					54	34					53	26				
1949	58	30					57	35					55	32					53	26				
1950	58	29					61	27					55	33					54	25				
1953	57	35					57	48					55	32					55	25				
1954																								
1956																								
1958	58	38					59	46					55	29					55	26				
1960																								
1962	60	43	50	38	82	7	61	45	56	29	86	6	58	40	43	40	83	7	59	40	43	41	83	8
1965		45						44						40						43				
1969	60	47	49	34	83	10	62	48	46	45	83	8	59	43	35	39	80	8	59	43	40	44	84	7
1972	55	48	35	43	79	8	59	45	41	43	81	6	59	44	41	46	78	9	56	44	34	47	73	8
1976	62	40	44	45	83	6	62	44	31	60	83	6	59	40	34	46	84	5	57	37	40	41	78	7
1982	60	38	52	28	87	6	60	31	63	30	89	4	56	38	42	40	79	9	59	45	45	38	81	8
1983	60	30	62	19	86	3	58	52	64	22	89	5	57	40	32	43	78	8	58	39	53	37	84	7
1984	61	30	37	57	78	13	62	43	68	24	80	9	54	29	70	21	62	8	60	38	51	26	65	12
1985	60	35	38	38	85	4	61	33	55	36	73	4	49	21	42	37	69	10	59	41	47	29	69	7
1986	59	34	60	27	82	4	57	25	67	33	87	3	50	26	45	37	64	9	59	48	48	39	73	9
1987	59	40	65	24	85	4	59	36	71	22	85	4	49	19	37	47	58	10	58	46	43	39	72	8
1988	61	38	55	30	85	7	62	40	60	31	91	5	50	23	42	33	64	11	59	52	42	40	71	7
1989	60	41	60	28	78	5	59	28	51	39	83	3	52	33	48	36	64	8	60	46	49	33	72	8
1990	62	39	52	39	78	6	60	48	55	29	84	7	53	33	47	32	69	7	59	48	50	37	73	8
1991	59	36	52	32	83	3	61	46	38	34	87	4	52	30	39	40	61	9	58	47	42	31	75	9
1992	57	37	45	34	71	5	61	37	55	34	82	5	53	34	42	32	64	7	57	46	44	34	63	6
1993	62	33	47	39	78	5	61	33	29	35	79	5	54	39	48	37	64	9	58	50	47	28	71	7
1994	62	38	48	37	81	6	60	29	50	36	87	4	55	40	44	24	67	8	56	49	49	27	70	7
1995	57	45	51	24	79	5	62	42	61	32	79	7	55	42	48	32	67	8	60	47	52	29	68	7
1996	62	38	59	31	78	5	64	32	51	37	83	5	59	47	50	29	65	8	59	47	53	31	70	6
1997	62	37	56	31	81	5	63	35	59	29	89	5	60	49	43	33	66	9	59	46	48	30	71	6
1998	61	46	57	26	78	6	58	43	75	17	72	4	61	52	46	32	71	9	59	44	49	27	65	7
1999	58	40	56	27	78	6	60	26	51	36	77	9	60	53	45	36	70	9	58	48	43	38	67	7
2000	60	36	62	27	82	6	60	35	65	21	88	4	59	56	41	37	64	10	57	49	26	17	65	3

Notes: The Table reports (NOT YET WEIGHTED WITH MULTIPLIERS) the average age, the percent female, the fraction married (among females), the fraction widowed (among females), the fraction married (among males), the fraction widowed (among males) for each wealth fractile.

Table B4: Gender, Age, and Marital Status and by Fractiles of Total Wealth in the United States, 1916-2000 (continued)

	Top 0.5-0.25%						Top 0.25-0.1%						Top 0.1-0.05%						Top 0.05-0.01%						Top 0.01%					
		Female			Male			Female			Male			Female			Male			Female			Male			Female			Male	
	Age	Female	Married	Widow/er	Married	Widow/er	Age	Female	Married	Widow/er	Married	Widow/er	Age	Female	Married	Widow/er	Married	Widow/er	Age	Female	Married	Widow/er	Married	Widow/er	Age	Female	Married	Widow/er	Married	Widow/er
1916		25					1916		25				1916		25				1916		25				1916		25			
1917		26					1917		28				1917		29				1917		32				1917		25			
1918		26					1918		26				1918		29				1918		26				1918		23			
1919	55	24					1919	56	25				1919	57	24				1919	55	28				1919	58	16			
1920	55	23					1920	55	22				1920	55	25				1920	57	23				1920	56	26			
1921	55	22					1921	56	25				1921	56	26				1921	57	21				1921	55	40			
1922	55	27					1922	55	25				1922	56	25				1922	56	24				1922	58	20			
1923	56	29					1923	56	26				1923	56	29				1923	57	28				1923	57	33			
1924	56	26					1924	56	28				1924	55	26				1924	58	26				1924	52	35			
1925	55	26	37	41	72	10	1925	56	24	37	42	75	10	1925	57	23	42	43	76	9	1925	58	29	36	43	71	11	1925	58	24	59	38	66	11
1926	55	28	38	39	72	12	1926	56	29	38	46	76	9	1926	57	28	45	37	75	10	1926	58	23	43	45	74	10	1926	61	21	51	43	72	9
1927	54	23	43	39	79	10	1927	55	27	43	41	77	9	1927	56	27	34	48	75	10	1927	57	27	55	33	74	12	1927	57	20	35	45	72	10
1928	54	21	40	39	78	9	1928	55	29	41	41	75	10	1928	56	25	39	50	77	11	1928	56	21	40	48	73	10	1928	59	21	41	46	87	7
1929	54	26	42	40	75	10	1929	55	30	36	43	78	8	1929	56	27	42	40	75	12	1929	57	26	37	50	75	13	1929	54	24	62	29	73	8
1930	53	21	38	38	79	8	1930	55	29	40	40	76	8	1930	57	33	47	37	80	9	1930	58	24	46	44	82	8	1930	56	26	56	31	76	9
1931	52	14	49	38	84	6	1931	57	32	35	41	77	10	1931	57	32	44	44	76	10	1931	58	31	35	49	77	11	1931	59	26	36	35	69	10
1932	56	28	43	40	73	11	1932	56	31	36	44	72	12	1932	57	34	44	39	78	11	1932	57	29	35	49	74	9	1932	59	35	35	44	75	9
1933	56	30	40	43	72	11	1933	57	34	37	46	76	12	1933	57	32	38	47	70	12	1933	58	30	33	50	71	13	1933	56	24	41	35	68	8
1934	56	32	40	43	73	11	1934	57	36	41	40	71	11	1934	57	34	39	42	69	11	1934	59	36	40	46	76	11	1934	61	31	42	39	61	13
1935	57	36	37	43	68	13	1935	56	39	39	40	70	11	1935	57	39	33	45	72	9	1935	59	33	40	46	75	13	1935	59	27	29	55	67	10
1936	57	35	32	46	71	11	1936	57	34	35	45	72	12	1936	59	34	41	42	74	12	1936	56	35	43	42	75	10	1936	57	32	50	38	69	13
1937	57	36	36	42	70	12	1937	58	38	38	42	76	11	1937	57	38	47	36	71	10	1937	59	35	34	49	70	11	1937	57	33	34	38	73	7
1938	57	35	36	42	71	11	1938	58	34	37	45	76	10	1938	58	35	33	42	71	12	1938	58	35	41	39	65	11	1938	56	35	46	37	60	7
1939	57	36	37	45	70	11	1939	58	36	38	46	71	10	1939	57	36	46	37	70	11	1939	60	36	33	42	73	13	1939	53	31	39	49	60	9
1940	57	35	37	42	72	11	1940	57	37	37	41	75	10	1940	58	36	34	42	75	9	1940	59	40	39	42	76	11	1940	58	37	42	37	79	11
1941	58	36	31	46	74	10	1941	57	37	40	43	74	9	1941	57	39	37	41	71	10	1941	59	36	37	47	75	11	1941	59	39	58	35	76	14
1942	57	37	37	42	73	10	1942	57	38	36	42	71	10	1942	58	34	31	50	75	8	1942	57	39	41	41	66	9	1942	56	48	49	36	70	18
1943	55	32	41	40	74	8	1943	57	34	35	41	77	9	1943	56	31	39	43	70	10	1943	56	41	42	38	71	8	1943	53	26	36	51	61	7
1944	54	28	40	42	73	8	1944	54	34	41	37	72	8	1944	54	32	44	39	75	7	1944	57	33	39	45	73	10	1944	58	32	28	41	63	8
1945	55	32	39	41	77	8	1945	55	30	38	42	75	7	1945	57	32	43	43	75	8	1945	56	35	52	30	78	8	1945	59	42	57	36	80	10
1946							1946							1946							1946							1946						
1947							1947							1947							1947							1947						
1948	54	46					1948	55	24					1948	56	27					1948	56	31					1948	61	26				
1949	54	46					1949	56	22					1949	57	27					1949	58	29					1949	57	35				
1950	55	45					1950	55	27					1950	56	28					1950	57	29					1950	61	27				
1953	54	46					1953	55	26					1953	57	31					1953	56	32					1953	57	48				
1954							1954							1954							1954							1954						
1956							1956							1956							1956							1956						
1958	55	45					1958	57	30					1958	57	32					1958	58	36					1958	59	46				
1960							1960							1960							1960							1960						
1962	59	39	41	42	82	7	1962	58	41	45	36	80	7	1962	59	45	56	32	85	6	1962	60	43	48	40	81	7	1962	61	45	56	29	86	6
1965		42					1965	0	42	0	0	0	0	1965		42					1965		45					1965		44				
1969	59	41	39	40	83	7	1969	60	39	49	38	81	7	1969	60	41	42	41	85	6	1969	59	47	50	31	83	10	1969	62	48	46	45	83	8
1972	59	43	40	42	79	8	1972	59	46	42	36	82	8	1972	58	45	40	32	83	6	1972	54	49	34	43	79	9	1972	59	45	41	43	81	6
1976	62	42	33	47	81	7	1976	60	42	38	44	83	7	1976	60	42	43	41	81	7	1976	62	40	47	41	83	6	1976	62	44	31	60	83	6
1982	58	44	47	35	80	7	1982	59	42	49	38	79	7	1982	60	38	50	40	83	5	1982	60	39	49	28	86	6	1982	60	31	63	30	89	4
1983	60	34	56	28	89	8	1983	61	39	38	54	84	6	1983	59	38	60	28	94	2	1983	60	24	62	18	85	3	1983	58	52	64	22	89	5
1984	58	51	62	22	81	5	1984	60	50	76	14	76	7	1984	63	48	65	32	94	2	1984	61	26	29	65	78	14	1984	62	43	68	24	80	9
1985	58	37	41	35	79	4	1985	59	42	53	29	77	7	1985	59	51	53	30	83	10	1985	60	36	34	39	88	4	1985	61	33	55	36	73	4
1986	58	44	45	37	72	7	1986	58	45	53	30	76	6	1986	60	37	46	31	81	5	1986	59	36	58	26	81	4	1986	57	25	67	33	87	3
1987	59	42	49	35	76	8	1987	60	30	56	34	80	5	1987	58	31	62	32	79	4	1987	59	41	63	25	85	4	1987	59	36	71	22	85	4
1988	59	47	46	31	77	6	1988	56	38	44	28	74	4	1988	60	37	50	30	78	5	1988	61	37	54	30	84	8	1988	62	40	60	31	91	5
1989	57	44	50	30	70	6	1989	59	41	60	28	75	6	1989	60	40	62	27	78	5	1989	60	44	62	25	77	5	1989	59	28	51	39	83	3
1990	57	42	49	34	71	6	1990	59	51	59	23	74	7	1990	59	48	65	26	73	7	1990	63	37	51	41	77	6	1990	60	48	55	29	84	7
1991	58	44	49	27	71	7	1991	57	43	45	34	69	6	1991	55	43	44	26	74	6	1991	58	34	55	31	82	3	1991	61	46	38	34	87	4
1992	58	43	45	31	71	5	1992	59	41	52	30	75	6	1992	59	45	46	33	77	6	1992	56	37	43	34	68	5	1992	61	37	55	34	82	5
1993	55	46	47	36	71	6	1993	54	46	42	24	75	5	1993	55	43	56	23	70	6	1993	63	33	51	40	78	5	1993	61	33	29	35	79	5
1994	58	43	58	28	66	5	1994	56	43	47	28	67	5	1994	51	41	37	30	66	5	1994	62	40	48	37	79	7	1994	60	29	50	36	87	4
1995	57	47	47	24	75	7	1995	59	46	49	30	77	7	1995	61	38	48	33	77	6	1995	56	46	48	22	79	5	1995	62	42	61	32	79	7
1996	53	42	53	24	60	6	1996	60	42	47	29	74	6	1996	57	38	42	27	75	5	1996	61	39	61	30	77	5	1996	64	32	51	37	83	5
1997	56	39	51	31	61	4	1997	55	51	41	21	79	6	1997	62	43	52	33	76	8	1997	62	37	55	31	79	5	1997	63	35	59	29	89	5
1998	58	46	50	26	73	6	1998	56	40	48	29	67	7	1998	58	44	39	27	79	7	1998	62	47	53	28	80	6	1998	58	43	75	17	72	4
1999	57	48	47	20	71	5	1999	58	44	53	28	67	6	1999	53	35	53	30	58	4	1999	58	44	57	25	78	5	1999	60	26	51	36	77	9
2000	61	37	53	32	65	9	2000	59	44	56	22	68	5	2000	59	35	49	36	69	8	2000	60	37	61	28	81	6	2000	60	35	65	21	88	4

Notes: The Table reports the average age, the percent female, the fraction married (among females), the fraction widowed (among females), the fraction married (among males), the fraction widowed (among males) for each wealth fractile.

Table C1: Comparing Top 1% Wealth Share with Previous Estimates

Author	Kopczuk-Saez	Lampman (1962)	Smith (1984)	Wolff-Marley (1989)	Wolff (1995)	Scholz (2003)
Unit	Adults	Adults	Individuals	Individuals	Households	Households
Data	Estates	Estates	Estates	Patched Estates	Patched SCF-Estates	SCF
Wealth	Net Worth	Net Worth	Net Worth	Total Assets	Net Worth	Net Worth
	(1)	(2)	(3)	(4)	(5)	(6)
1922	36.02	31.6		34.0	36.7	
1929	36.76	36.3		37.2	44.2	
1933	30.31	28.3		31.3	33.3	
1939	25.95	30.6		38.1	36.4	
1945	24.65	23.3		28.9	29.8	
1949	22.59	20.8		25.7	27.1	
1953	23.77	24.3		28.1	31.2	
1954	23.18	24.0				
1956	24.75	26.0				
1958	24.18		26.6	27.0		
1962	24.39		28.2	30.1	31.8	31.6
1965	24.70		25.4	31.9	34.4	
1969	22.86		27.4	29.0	31.1	
1972	23.13		21.9	28.6	29.1	
1976	19.32		19.2	18.9	19.9	
1983	21.07				30.9	31.5
1986	22.66				31.9	
1989	21.96				35.7	30.0
1992	21.18					30.0
1995	21.54					35.3
1998	21.70					34.1
2000	20.79					

Notes: Lampman (1962), Table 94, p. 204, estimates are based on all estate tax returns filers and Pareto interpolation to optain top 1% share.
Smith (1984), Table 1, p. 422, ranks individuals by total assets (not net worth) and defines top 1% group relative to total population (not only adults), and reports share of net-worth for this group.
Wolff-Marley (1989), Table 6, p. 786, row W2, completed and corrected in Wolff (1995), Table A1, pp. 78-79, col. (1), "Wolff-Marley series". Top 1% defined relative to total population (not only adults). Estimates based on previous estimates by Lampman (1962) and Smith (1984).
Wolff (1995), Table A1, pp. 78-79, col. (6) "New Household Series" based on previous "Wolff-Marley" series and SCF estimations.
Scholz (2003) based on SCF data.

Table C2: Very Top Shares from Forbes 400 Richest Americans

			Very Top Wealth Shares			Ratio to Average Wealth			Top Estate Share
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Forbes 400 Total Wealth (billions 2000 $)	Forbes 400 Average Wealth (millions 2000 $)	Top .0002% (top 404 in 2000)	Top .00005% (top 101 in 2000)	Top .0002-.00005% (rank 102 to 404 in 2000)	Top .0002% (top 404 in 2000)	Top .00005% (top 101 in 2000)	Top .0002-.00005% (rank 102 to 404 in 2000)	Top .01% Share (top 20,000 in 2000)
1982	164.2	411	0.984	0.521	0.510	4,922	10,414	3,400	2.525
1983	204.1	510	1.187	0.593	0.593	5,933	11,864	3,957	3.194
1984	207.3	518	1.165	0.595	0.570	5,826	11,909	3,799	3.514
1985	214.5	536	1.153	0.567	0.586	5,763	11,335	3,905	4.085
1986	245.1	613	1.217	0.628	0.589	6,084	12,560	3,926	3.913
1987	333.6	834	1.603	0.856	0.747	8,017	17,129	4,979	3.438
1988	320.4	801	1.486	0.797	0.689	7,430	15,946	4,592	3.596
1989	373.1	933	1.670	0.885	0.785	8,349	17,702	5,232	3.791
1990	359.5	899	1.635	0.868	0.767	8,173	17,360	5,110	3.631
1991	363.4	909	1.658	0.932	0.726	8,291	18,649	4,839	3.549
1992	369.3	923	1.655	0.946	0.709	8,277	18,930	4,726	3.715
1993	390.6	977	1.735	1.000	0.735	8,676	20,001	4,901	3.761
1994	405.2	1,013	1.799	1.049	0.750	8,994	20,976	5,001	3.857
1995	446.0	1,115	1.923	1.142	0.781	9,614	22,841	5,205	3.988
1996	514.0	1,285	2.089	1.221	0.868	10,444	24,424	5,785	3.836
1997	669.5	1,674	2.537	1.552	0.985	12,687	31,042	6,569	3.778
1998	779.3	1,948	2.715	1.751	0.965	13,577	35,017	6,431	3.987
1999	1033.0	2,582	3.286	2.268	1.018	16,429	45,355	6,787	3.910
2000	1200.1	3,000	3.743	2.510	1.233	18,715	50,202	8,219	3.896
2001	925.1	2,313	3.031	1.971	1.060	15,157	39,428	7,066	
2002	860.0	2,150	2.958	1.909	1.049	14,791	38,184	6,993	

Notes: Data source is the Forbes 400 Richest American list published annually in October by Forbes Magazine since 1982.
Columns (1) and (2) report the total wealth and average wealth of the Forbes 400 richest (in 2000 dollars, CPI from Table A)
Columns (3) to (5) report the share of total wealth (reported in Table A, col. (3)) for the top .0002%, the top .00005%, and the top .0002-.00005% estimated using the Forbes list.
The top .0002% corresponds to the top 404 richest americans in 2000. The top .00005% corresponds to the top 101 richest americans in 2000.
The top .0002-.00005% corresponds to the americans with wealth rank 102 to 404 in 2000.
Columns (6) to (8) report the ratio of the average wealth in the top .0002%, the top .00005%, and the top .0002-.00005% to the average wealth in the United States (from col. (4) in Table A).
Column (9) report the top .01% wealth share estimated from tax returns (from Table B1, col. (7)).

Table D: Sample size, weights, asset details information

	Sample size							Average Weight							Fraction subject to a complete edit						
Groups	.01%	.05-.01%	.1-.05%	.25-.1%	.5-.25%	1-.5%	2-1%	.01%	.05-.01%	.1-.05%	.25-.1%	.5-.25%	1-.5%	2-1%	.01%	.05-.01%	.1-.05%	.25-.1%	.5-.25%	1-.5%	2-1%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1916	57	211	227	681	1,140	55		0.98	0.99	1.00	1.00	1.00	0.99		100%	93%	64%	44%	32%	42%	
1917	196	673	753	2,211	3,797	661		0.99	1.00	1.00	1.00	1.00	1.00		100%	90%	67%	46%	32%	33%	
1918	177	602	794	2,192	3,726	2,297		0.99	1.00	1.00	1.00	1.00	1.00		100%	93%	74%	48%	34%	34%	
1919	160	596	708	2,006	3,298	4,366		0.99	1.00	1.00	1.00	1.00	1.00		100%	98%	82%	52%	39%	34%	
1920	161	625	715	2,110	3,383	5,506		0.99	1.00	1.00	1.00	1.00	1.00		100%	98%	84%	53%	40%	34%	
1921	175	606	727	2,117	3,253	4,801		0.99	1.00	1.00	1.00	1.00	1.00		100%	15%	0%	0%	0%	0%	
1922	172	618	758	2,137	3,486	5,258		0.99	1.00	1.00	1.00	1.00	1.00		100%	22%	0%	0%	0%	0%	
1923	180	671	775	2,353	3,907	5,020		0.99	1.00	1.00	1.00	1.00	1.00		100%	23%	0%	0%	0%	0%	
1924	155	724	736	2,390	3,839	5,463		0.99	1.00	1.00	1.00	1.00	1.00		100%	26%	1%	0%	0%	0%	
1925	188	726	852	2,343	3,923	5,746		0.99	1.00	1.00	1.00	1.00	1.00		100%	32%	0%	0%	0%	0%	
1926	227	804	927	2,585	2,256	937		0.99	1.00	1.00	1.00	1.81	6.51		100%	27%	1%	0%	0%	0%	
1927	197	740	849	2,432	3,454			0.99	1.00	1.00	1.00	1.00			100%	42%	1%	0%	0%		
1928	215	752	916	2,681	3,754			0.99	1.00	1.00	1.00	1.00			100%	100%	88%	61%	52%		
1929	193	792	904	2,600	3,931	417		0.99	1.00	1.00	1.00	1.00	1.00		100%	100%	91%	65%	50%	70%	
1930	175	825	942	2,608	3,590	77		0.99	1.00	1.00	1.00	1.00	0.99		100%	100%	85%	59%	54%	75%	
1931	229	840	1,000	2,852	2,291			0.99	1.00	1.00	1.00	1.00			100%	23%	1%	0%	1%		
1932	244	839	1,035	2,519	2,470	377		0.99	1.00	1.00	1.14	1.76	1.76		89%	2%	0%	0%	0%	1%	
1933	210	899	992	3,033	4,541	907		0.99	1.00	1.00	1.00	1.00	1.00		100%	7%	0%	0%	0%	0%	
1934	276	939	1,057	3,124	4,788	777		1.00	1.00	1.00	1.00	1.00	1.00		93%	3%	0%	0%	0%	1%	
1935	260	957	1,127	3,153	4,567	992		0.99	1.00	1.00	1.00	1.16	2.97		100%	3%	0%	0%	0%	0%	
1936	222	901	1,239	3,385	5,471	4,672		0.99	1.00	1.00	1.00	1.00	1.00		100%	16%	0%	0%	0%	0%	
1937	258	997	1,139	3,493	5,603	5,078		1.00	1.00	1.00	1.00	1.00	1.00		100%	8%	0%	0%	0%	0%	
1938	241	917	1,180	3,344	5,378	4,729		1.00	1.00	1.00	1.00	1.00	1.00		100%	83%	49%	32%	23%	23%	
1939	243	1,074	1,129	3,445	5,502	5,249		1.00	1.00	1.00	1.00	1.00	1.00		100%	100%	78%	57%	41%	42%	
1940	252	1,027	1,239	3,477	5,787	5,505		0.99	1.00	1.00	1.00	1.00	1.00		100%	78%	47%	32%	21%	21%	
1941	260	1,039	1,193	3,379	5,613	6,537		0.99	1.00	1.00	1.00	1.00	1.00		98%	2%	0%	0%	0%	0%	
1942	224	927	1,208	3,201	5,113	5,001		0.99	1.00	1.00	1.00	1.05	1.25		100%	6%	0%	0%	0%	0%	
1943	278	971	1,121	3,444	5,212	5,123		1.00	1.00	1.00	1.00	1.00	1.00		99%	3%	0%	0%	0%	0%	
1944	252	966	998	3,000	4,920	7,240	332	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100%	89%	51%	33%	25%	20%	25%
1945	295	884	1,120	3,033	4,920	8,319	1,555	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100%	14%	0%	0%	0%	0%	0%
1962	321	1,290	1,531	4,228	7,001	13,717	25,448	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100%	100%	100%	100%	100%	100%	100%
1965	352	1,356	1,539	4,778	8,000	8,971	8,148	1.00	1.00	1.00	1.00	1.00	1.76	3.77	100%	100%	100%	100%	100%	100%	100%
1969	401	1,373	1,636	4,554	6,345	4,430	7,218	1.00	1.00	1.02	1.10	1.25	3.48	4.13	100%	100%	100%	100%	100%	100%	100%
1972	367	1,352	1,702	5,305	8,116	7,197	6,763	1.00	1.00	1.00	1.00	1.00	2.20	4.72	100%	100%	100%	100%	100%	100%	100%
1976	428	1,715	1,893	5,517	4,824	3,498	5,623	1.00	1.00	1.00	1.00	1.97	4.65	5.84	100%	100%	100%	100%	100%	100%	100%
1982	345	1,317	1,678	4,634	3,153	4,801	5,601	1.02	1.03	1.02	1.09	2.57	3.39	4.48	100%	100%	100%	100%	100%	100%	100%
1983	328	438	21	132	128	289	504	1.07	4.04	60.76	45.24	56.13	61.63	56.54	100%	100%	100%	100%	100%	100%	100%
1984	377	550	62	124	182	367	661	1.05	2.54	32.42	38.90	46.32	60.48	40.08	100%	100%	100%	100%	100%	100%	100%
1985	407	732	65	241	371	647	613	1.03	2.62	20.92	19.58	24.49	28.94	10.74	100%	100%	100%	100%	100%	100%	100%
1986	363	1,209	958	2,630	3,888	2,699	2,071	1.00	1.21	2.01	1.99	2.38	6.89	4.54	100%	100%	100%	100%	100%	100%	100%
1987	421	1,084	184	484	671	967	636	1.00	1.32	10.46	12.89	14.19	19.51	9.15	100%	100%	100%	100%	100%	100%	100%
1988	435	1,248	200	451	790	1,185	956	1.01	1.35	9.12	11.66	12.60	16.58	8.44	100%	100%	100%	100%	100%	100%	100%
1989	405	1,464	930	2,545	4,027	5,000	3,785	1.00	1.05	2.09	2.16	2.24	3.98	3.81	100%	100%	100%	100%	100%	100%	100%
1990	397	1,456	265	579	877	1,109	1,438	1.00	1.27	7.08	9.47	10.71	16.55	13.69	100%	100%	100%	100%	100%	100%	100%
1991	445	858	552	1,317	1,054	1,445	1,605	1.00	1.66	3.38	4.16	9.55	13.71	11.73	100%	100%	100%	100%	100%	100%	100%
1992	431	1,625	794	1,918	1,725	2,502	3,132	1.00	1.00	2.58	3.13	5.60	8.12	6.49	100%	100%	100%	100%	100%	100%	100%
1993	463	1,031	587	1,643	1,189	1,844	2,304	1.00	1.92	3.32	3.43	8.46	11.56	11.98	100%	100%	100%	100%	100%	100%	100%
1994	443	1,036	546	1,739	1,279	1,681	2,398	1.00	1.87	3.24	3.47	8.25	11.63	12.81	100%	100%	100%	100%	100%	100%	100%
1995	501	1,615	1,192	2,227	1,885	2,981	3,932	1.00	1.01	1.96	2.92	5.53	7.53	8.51	100%	100%	100%	100%	100%	100%	100%
1996	544	1,139	754	1,906	1,371	2,206	2,957	1.00	1.61	2.92	3.55	6.67	10.20	14.16	100%	100%	100%	100%	100%	100%	100%
1997	534	1,358	869	1,699	1,959	2,257	3,044	1.00	1.51	2.80	3.48	5.47	10.13	15.83	100%	100%	100%	100%	100%	100%	100%
1998	419	2,048	2,086	2,198	2,887	3,615	4,623	1.00	1.01	1.10	2.98	3.73	6.37	10.71	100%	100%	100%	100%	100%	100%	100%
1999	473	1,446	668	1,455	1,773	1,605	2,659	1.00	1.17	3.13	4.90	5.54	13.65	18.33	100%	100%	100%	100%	100%	100%	100%
2000	458	1,530	600	900	942	998	1,678	1.00	1.20	3.87	7.22	13.72	21.65	29.26	100%	100%	100%	100%	100%	100%	100%

Notes: Computations by authors based on estate tax return micro-dataset. See Appendix Section B for details.
The weight numbers represent the inverse of the sampling probability. Complete edit data provides detailed information on estate composition.

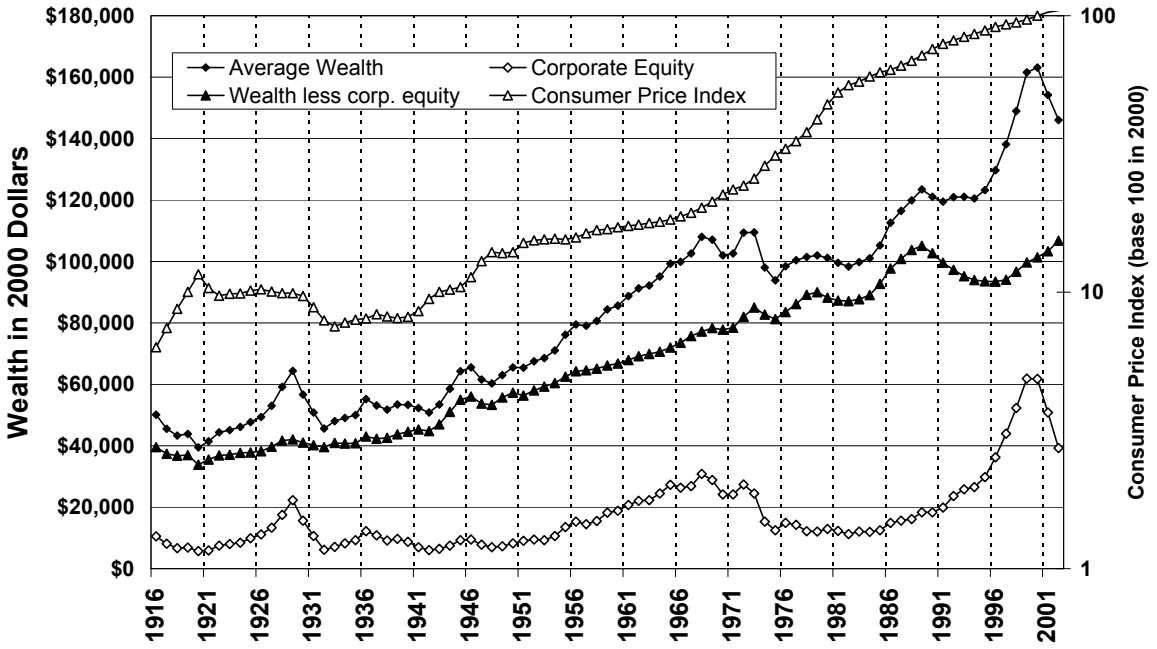

FIGURE 1

Average Real Wealth and Consumer Price Index in the United States, 1916-2002

Source: Table A, columns Average Wealth (in real 2000 dollars) and CPI (base 100 in 2000)

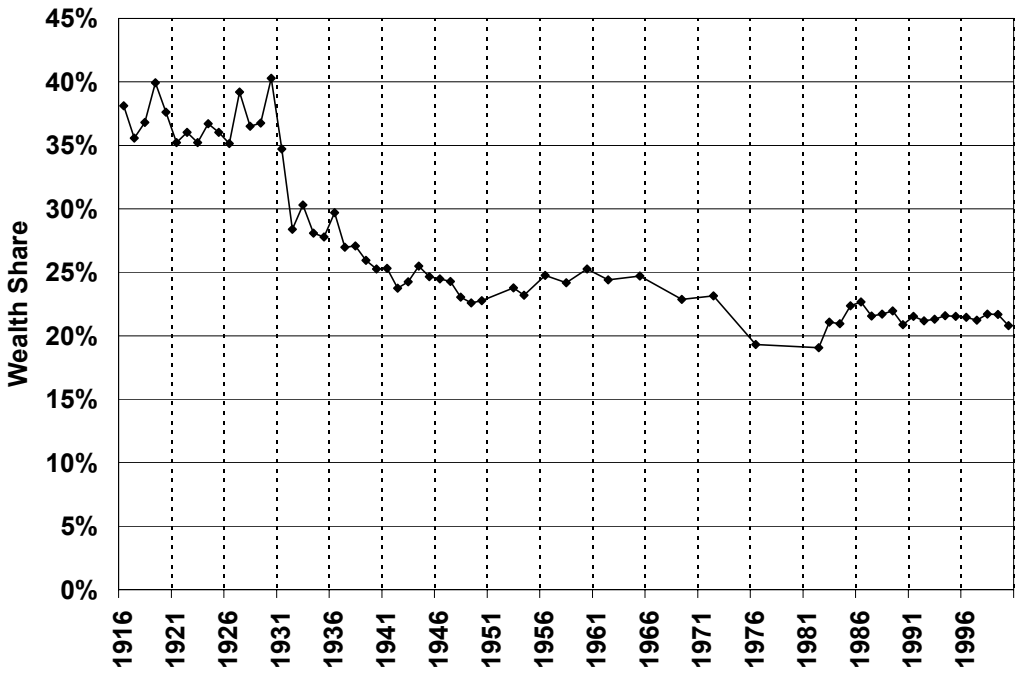

FIGURE 2

The Top 1% Wealth Share in the United States, 1916-2000

Source: Table B1, col. Top 1%.

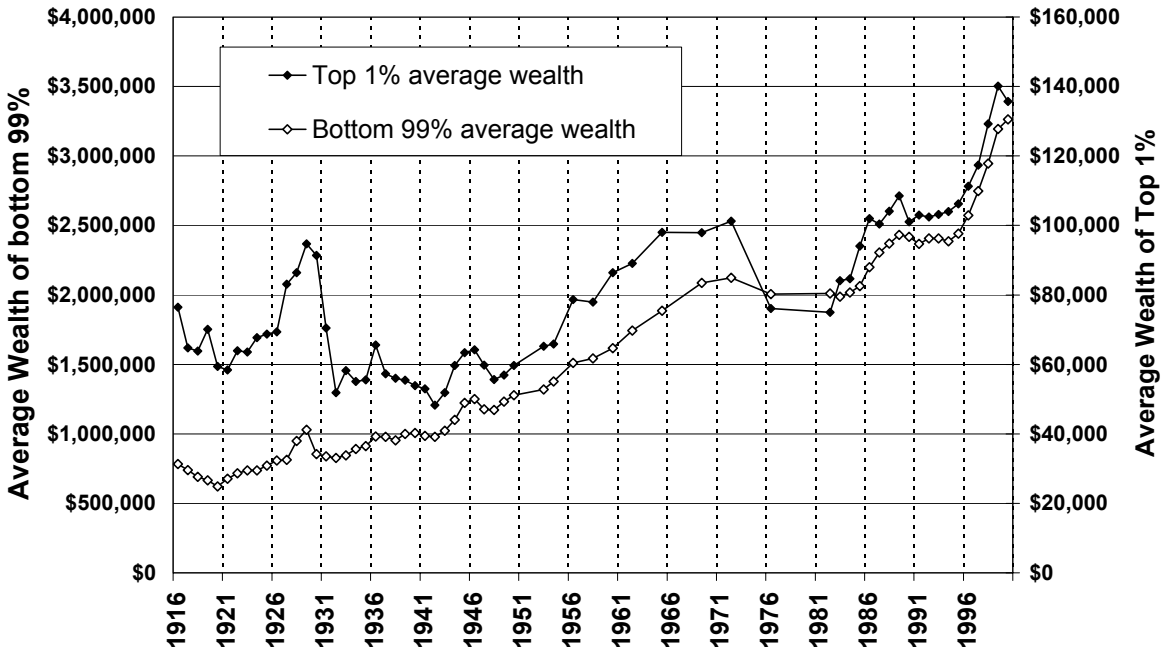

FIGURE 3

Average Real Wealth of bottom 99% and top 1% in the United States, 1916-2000

Source: Table B2, columns Top 1%, Bottom 99% computed from Average Wealth (Table A, Col. (4)) and Average Top 1% wealth. Amounts are expressed in 2000 dollars

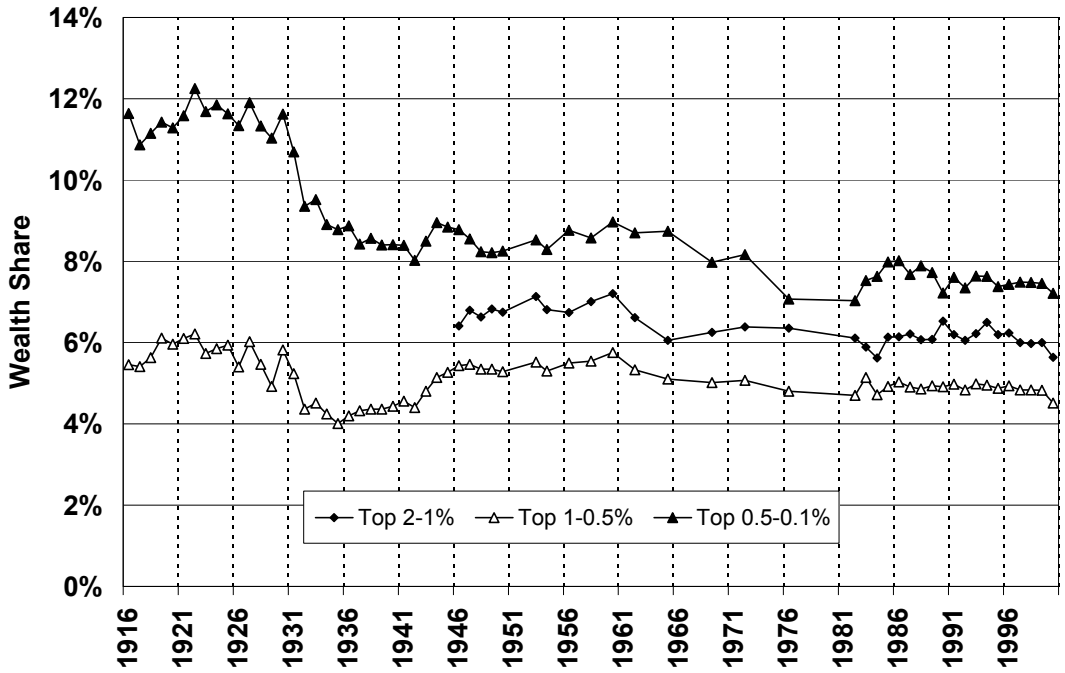

FIGURE 4

The Wealth Shares of Top 2-1%, 1-0.5%, and 0.5-0.1%, 1916-2000

Source: Table B1, columns Top 2-1%, 1-0.5%, and 0.5-0.1%.
Estimates for Top 2-1% are only available from 1946.

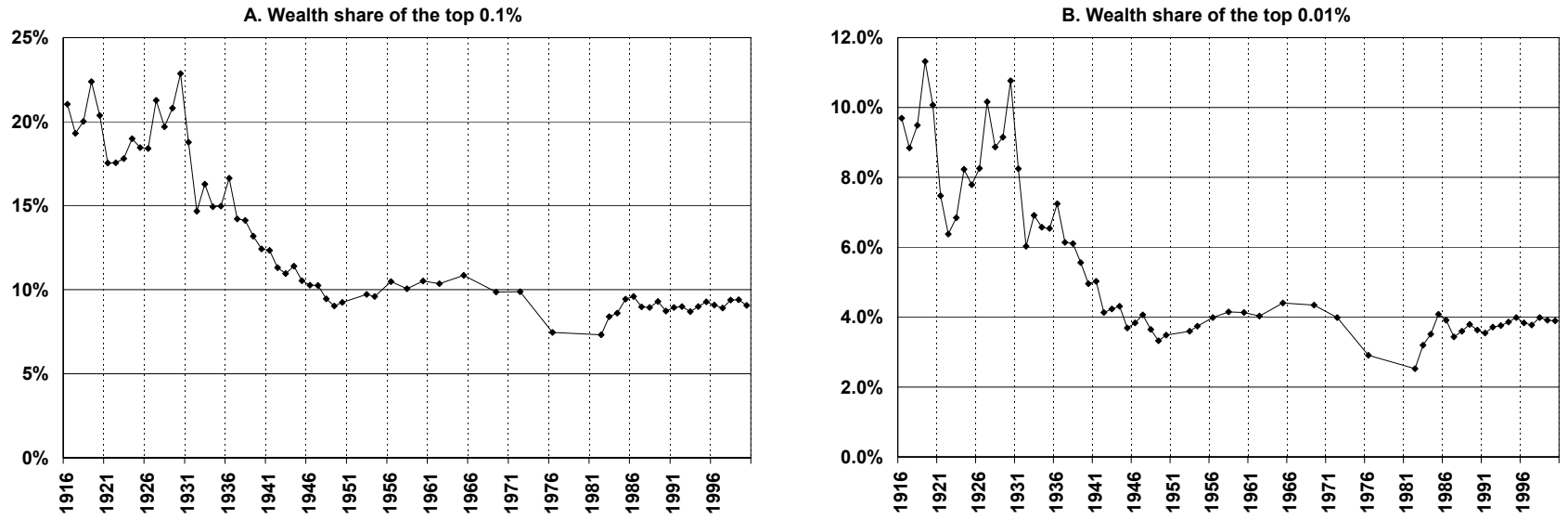

FIGURE 5

The Shares of the Top Wealth Groups in the United States, 1916-2000

Source: Table B1, Columns 0.1%, and 0.01%.

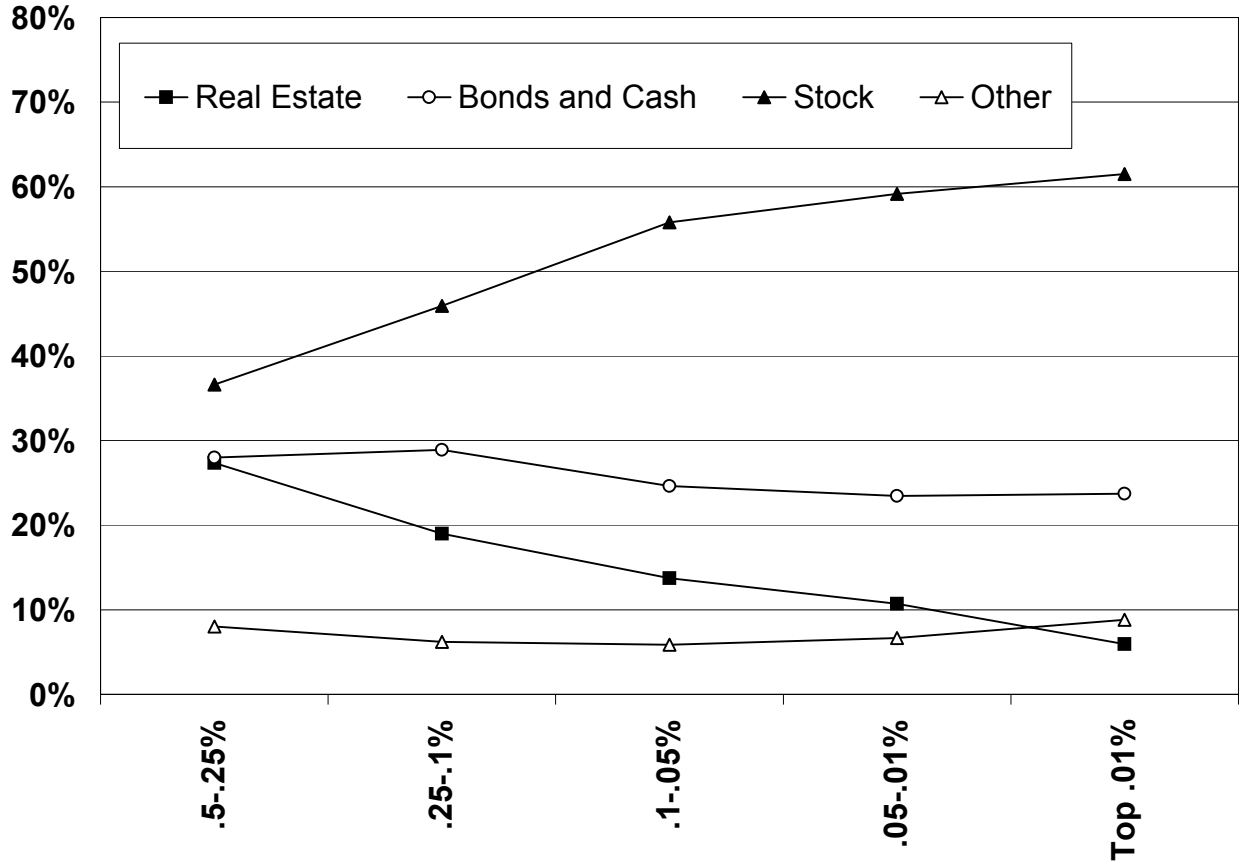

FIGURE 6

Wealth Composition of Top Groups within the Top 0.5% in 1929

Source: Table B3, row 1929.

Sum of four categories is 100%. Category debt has been excluded.

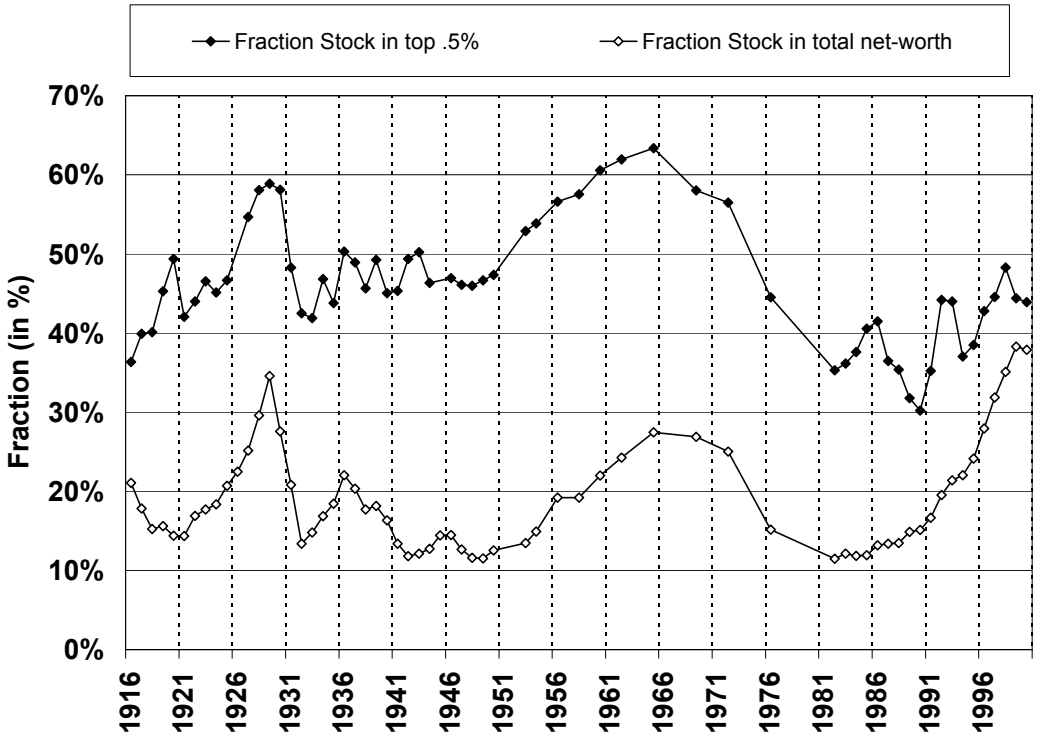

FIGURE 7

Fraction of Corporate Stock within the Top .5% and total net-worth, 1916-2000

Source: Table A, Column (7) and Table B3, Top .5%, column stock.

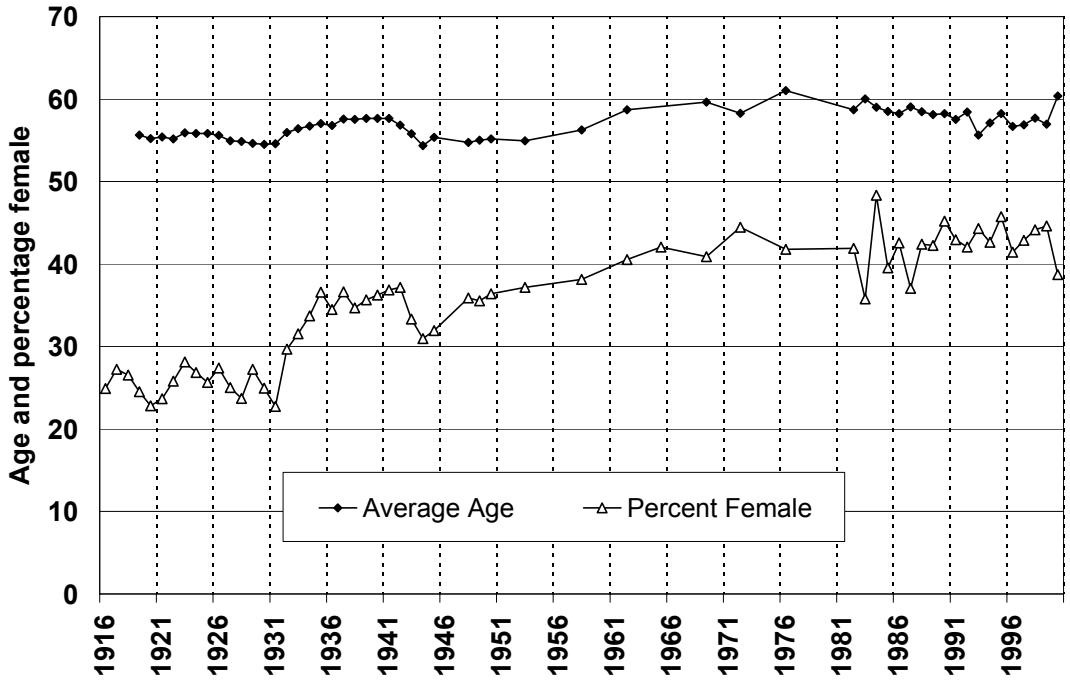

FIGURE 8

Average Age and Fraction Female in Top 0.5%, 1916-2000

Source: Table B4, columns age and fraction female.

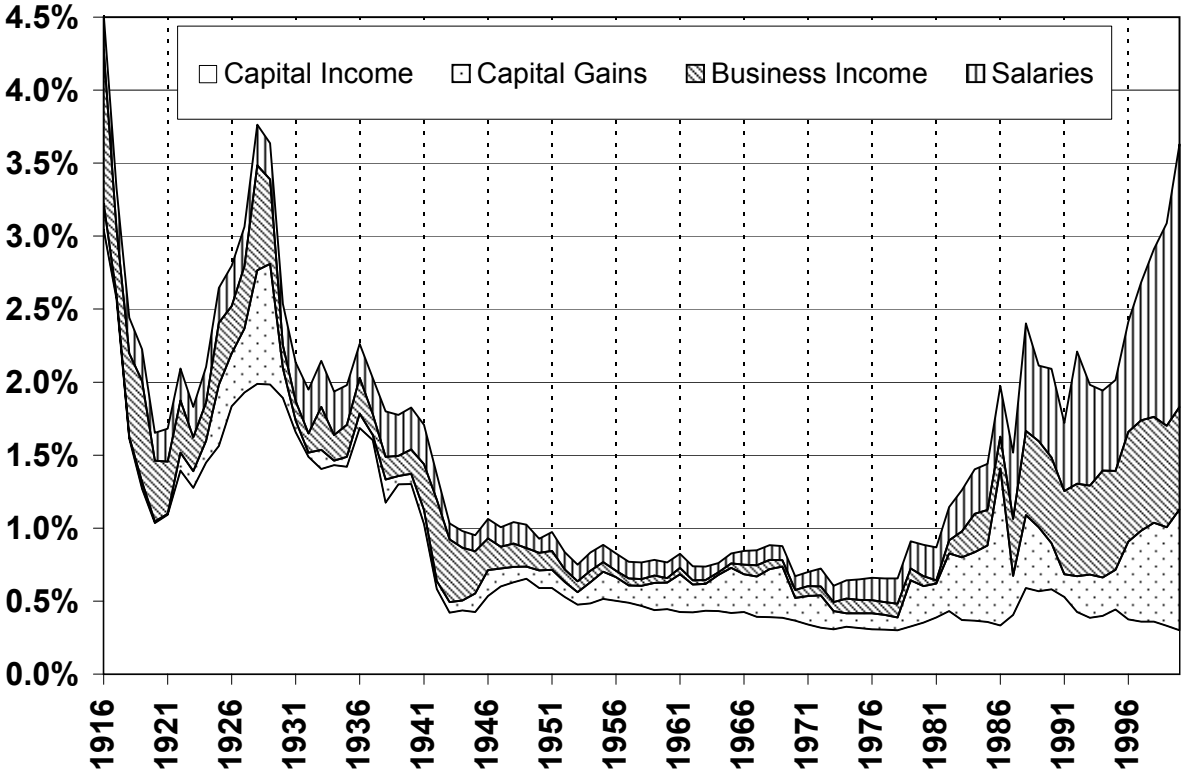

FIGURE 9

The Top 0.01% Income Share and Composition, 1916-2000

The Figure displays the top 0.01% income share (top curve). Estimates are based on families and not individuals.

Taxpayers are ranked by income excluding capital gains but capital gains included in the share. Interest, Rents, Trusts, etc.),

The Figure displays the composition of those top incomes into Capital Income (Dividends, Realized Capital Gains, Business Income (Sole Proprietorships, Partnerships, S-Corporations), and Salaries (Wages and Salaries, Pensions).

Source: Piketty and Saez (2003), series updated to year 2000

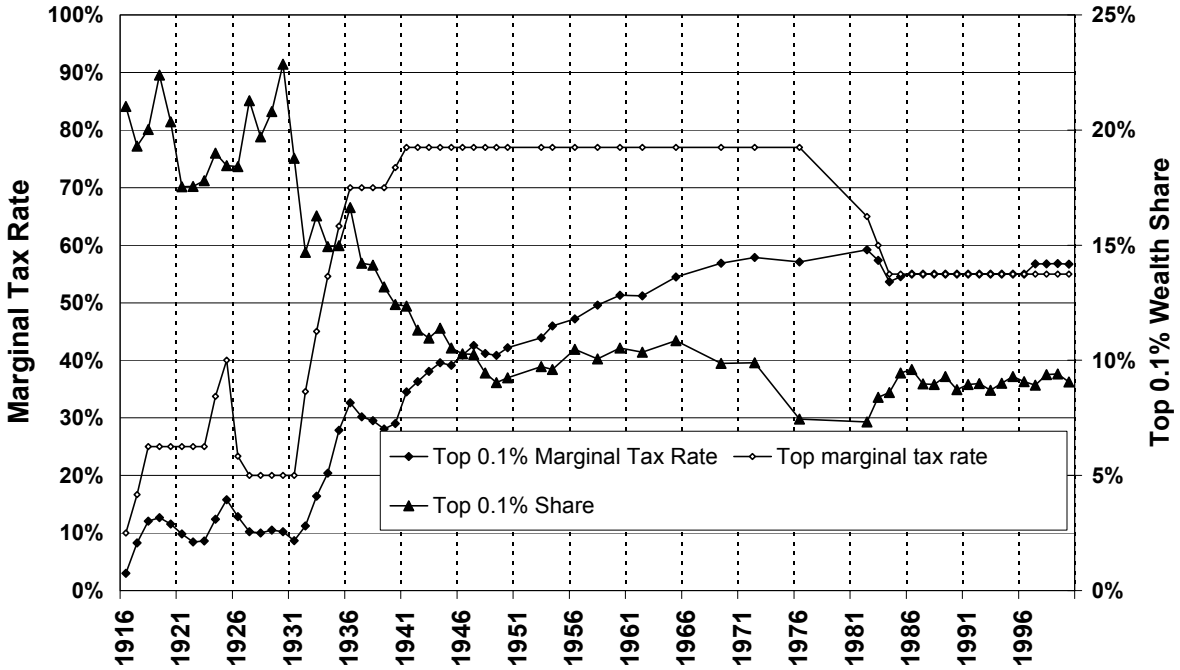

FIGURE 10

Marginal Tax Rate and Wealth Share for the Top 0.1%, 1916-2000

Notes: Marginal Tax Rate computations are made assuming no deductions beyond the basic exemption. Effective marginal tax rates are lower due to additional deductions (funeral expenses, spousal bequest deductions, charitable bequests, etc.)

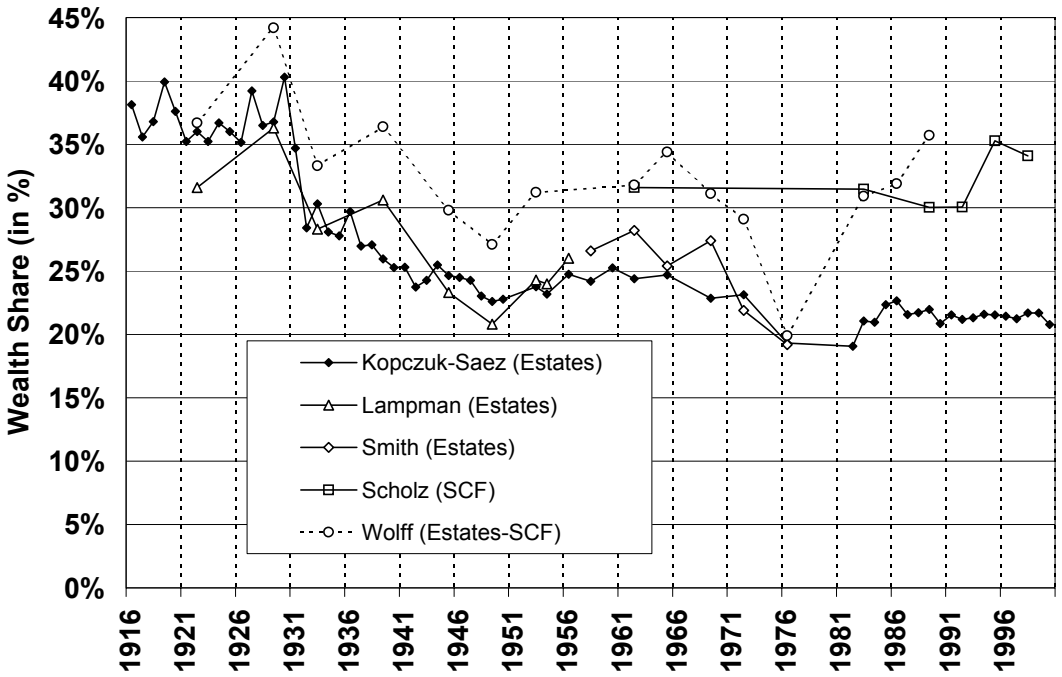

FIGURE 11

The Top 1% Wealth Share: Comparing Various Estimates

Source: Table C1

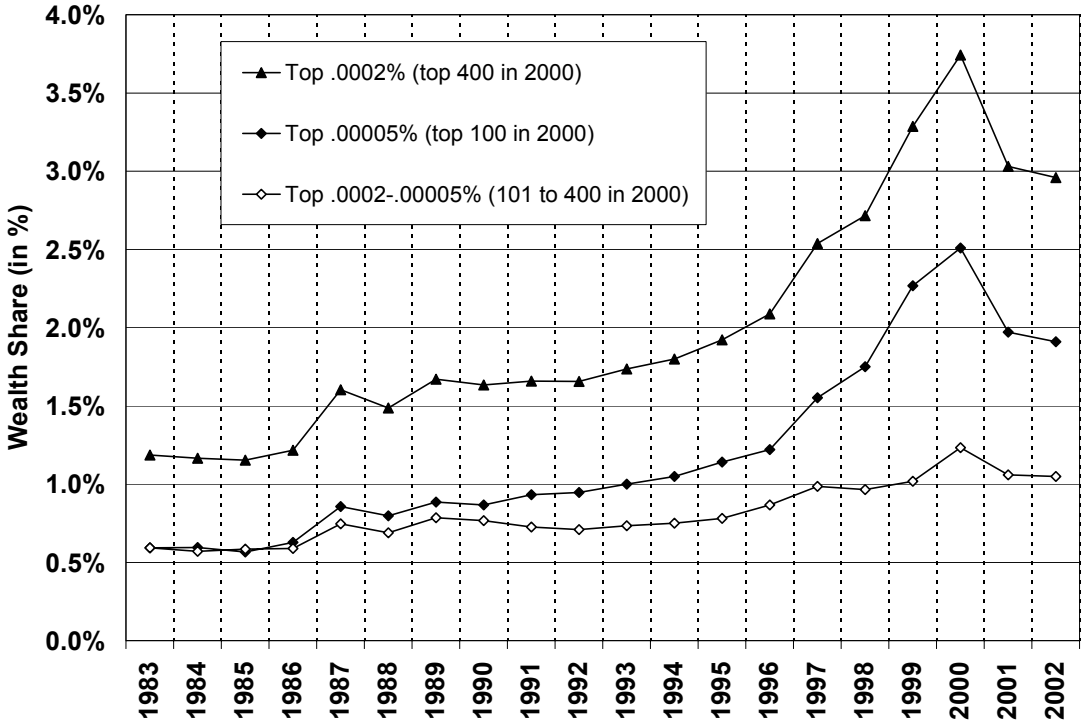

FIGURE 12

Very Top Shares from Forbes 400 Richest Americans, 1983-2002

Source: Table C2, col. (3), (4), (5), and (9).
Year 1982 has been excluded because, as the first survey year, the Forbes list missed a number of fortunes.

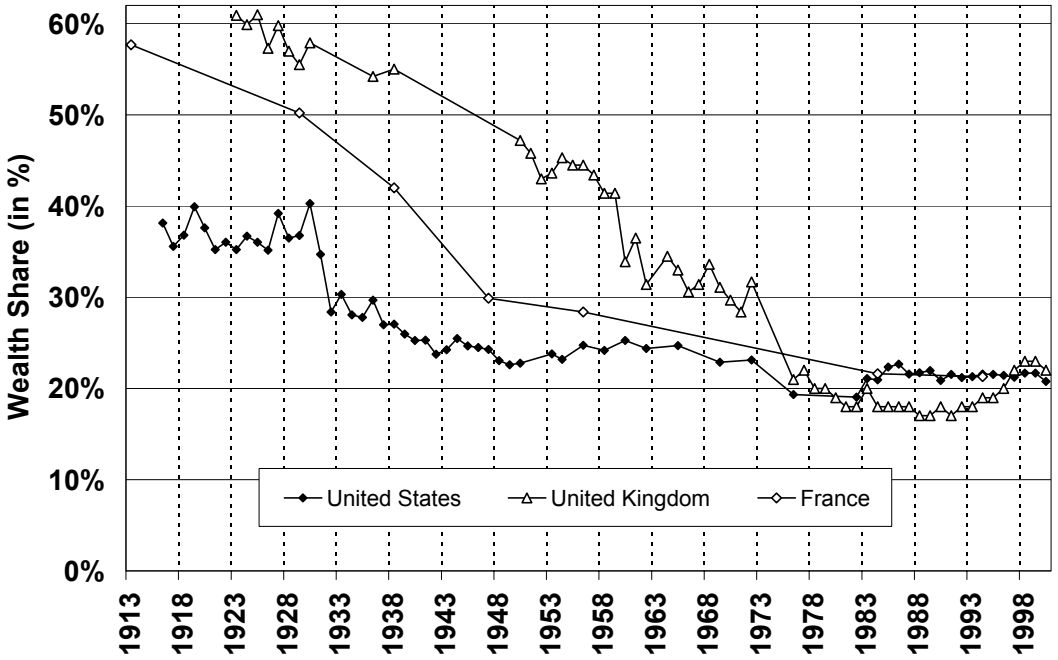

FIGURE 13

The Top 1% Wealth Share in the United States, the United Kingdom, and France

Sources: United States, Table B1, column Top 1%
United Kingdom: 1913-1972, Atkinson and Harrison (1978), p. 159, Column Top 1%, England and Wales.
1976-2000: Inland Revenue Personal Wealth (Top 1% Marketable net worth series for adult population, Table 13.5) http://www.inlandrevenue.gov.uk/stats/personal_wealth/dopw_t05_1.htm
Series 1913-1989 reproduced in Lindert (2000), Table 2, pp. 181-182.
France: Piketty, Postel-Vinay, and Rosenthal (2003), Table 4, Top 1% estate share
(wealth shares not yet available)

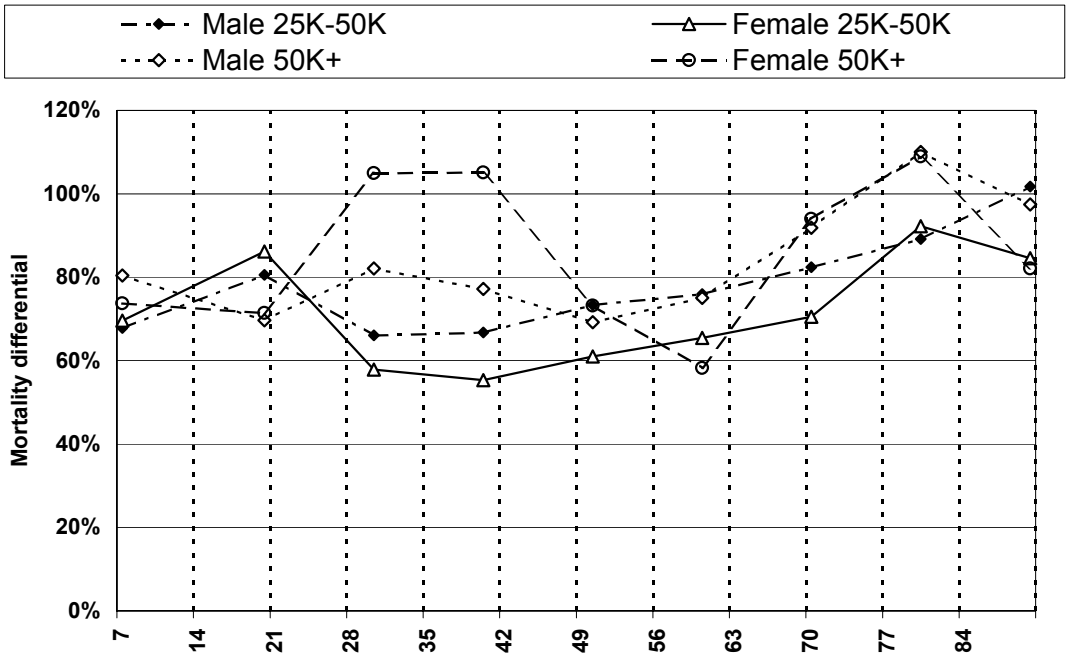

Figure A1

Ratio of the average mortality to the mortality of the wealthy based on Rogot et. al. (1992)

Note: The graph is based on tables 1 and 7 in Rogot et al. (1992) and shows the ratios of death rates for white individuals with family incomes above 25,000 and 50,000 of 1980 dollars to the corresponding death rates for the whole population (Table 1). The annualized death rates for income-age categories are computed by multiplying the annualized mortality rate for the age category by the ratio of actual and expected numbers of deaths in the income categories (all of these numbers are reported in Table 7). Deaths in Rogot et al. (1992) are tabulated for age categories of: 0-14, 15-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75-84, 85+ and the corresponding values of age used on the graph are 7, 10, 20, 30, 40, 50, 60, 70, 80 and 90. The number of individuals and deaths in the $50,000+ categories is relatively small and the resulting age-pattern is considerably noisier.

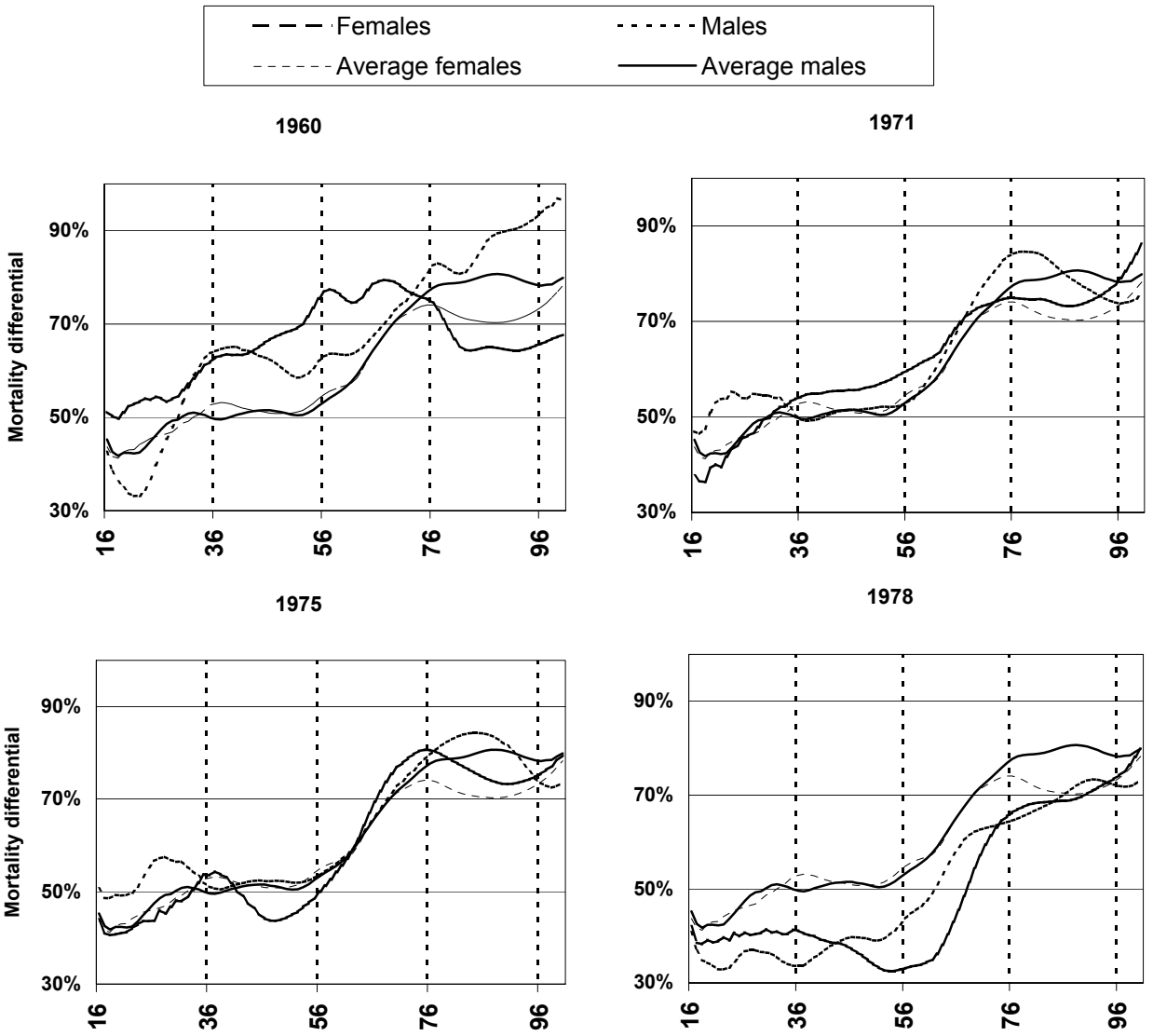

Figure A2

Ratio of the average mortality to the mortality of the wealthy, over time, based on Buck tables

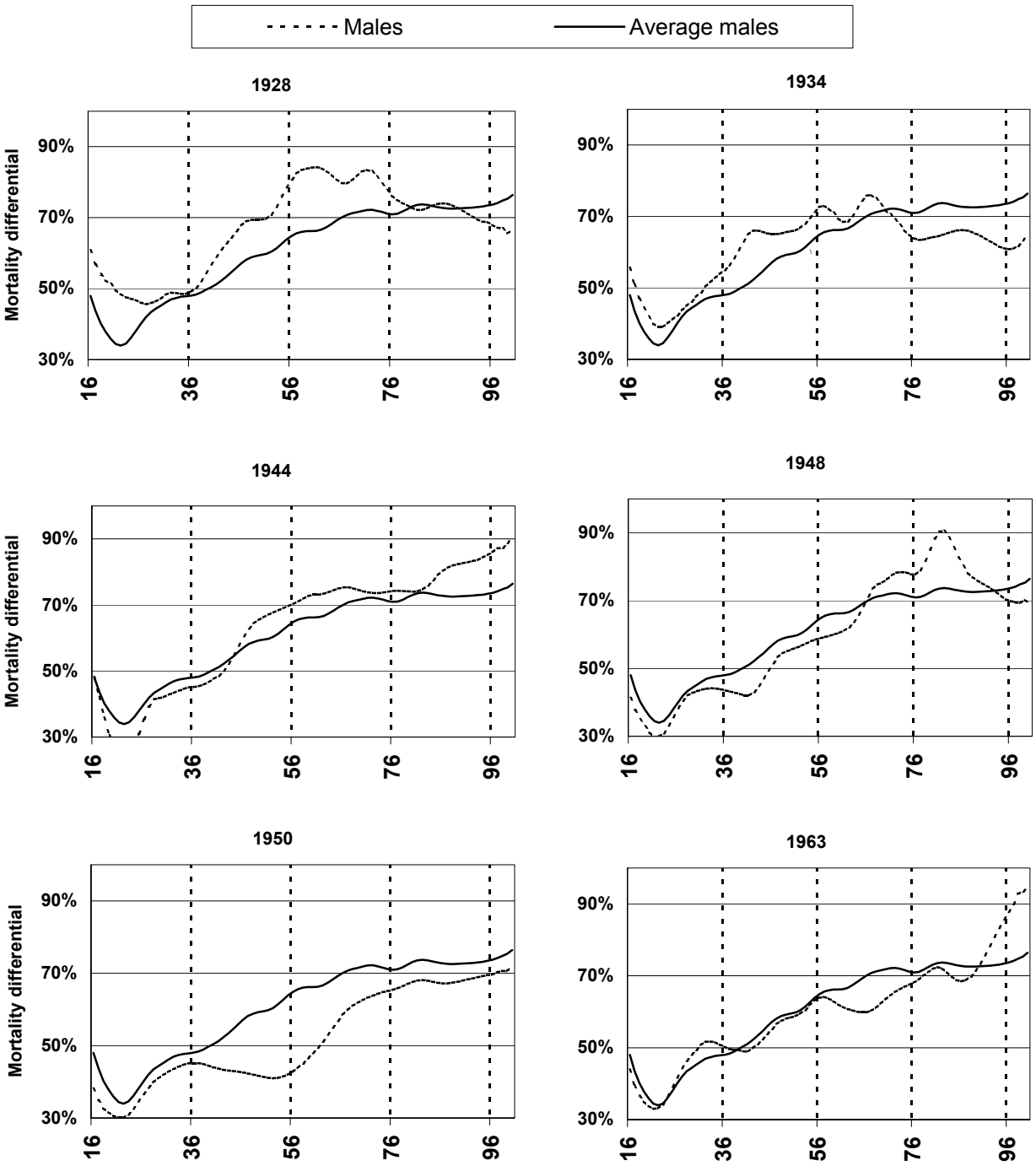

Figure A3

Ratio of the average mortality to the mortality of the wealthy, over time, based on annuity data

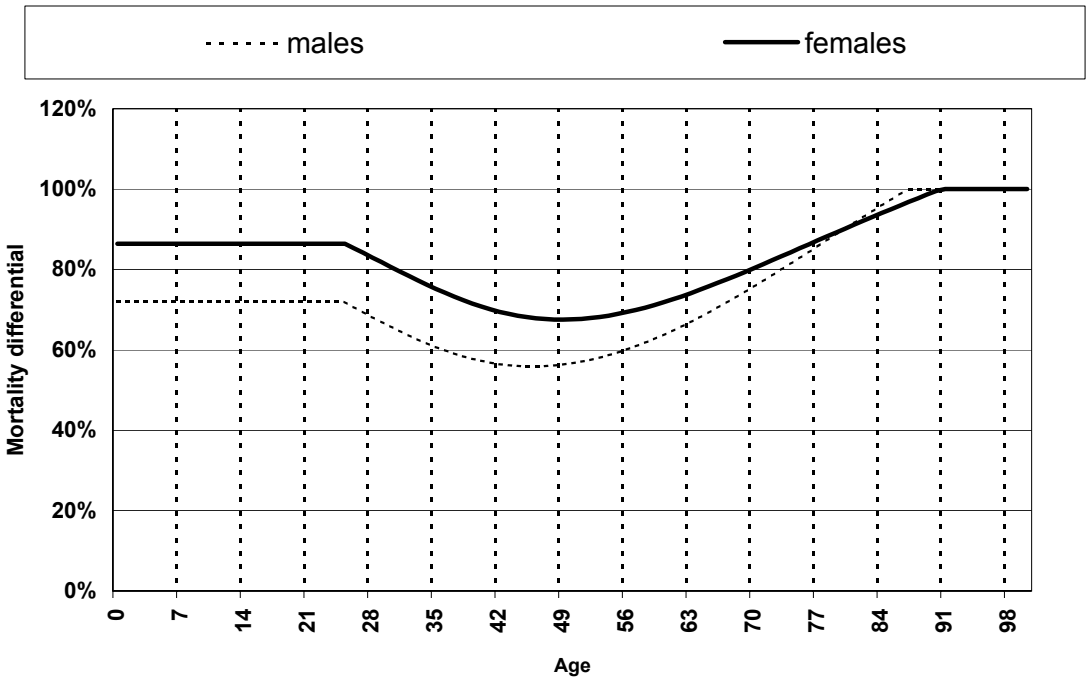

Figure A4
Socioeconomic mortality differentials

Note: the socioeconomic mortality differentials are based on estimates from Brown, Liebman and Pollet (2002) for the college-educated population. Values greater than 100% were set to 100%. See the discussion in Appendix B.

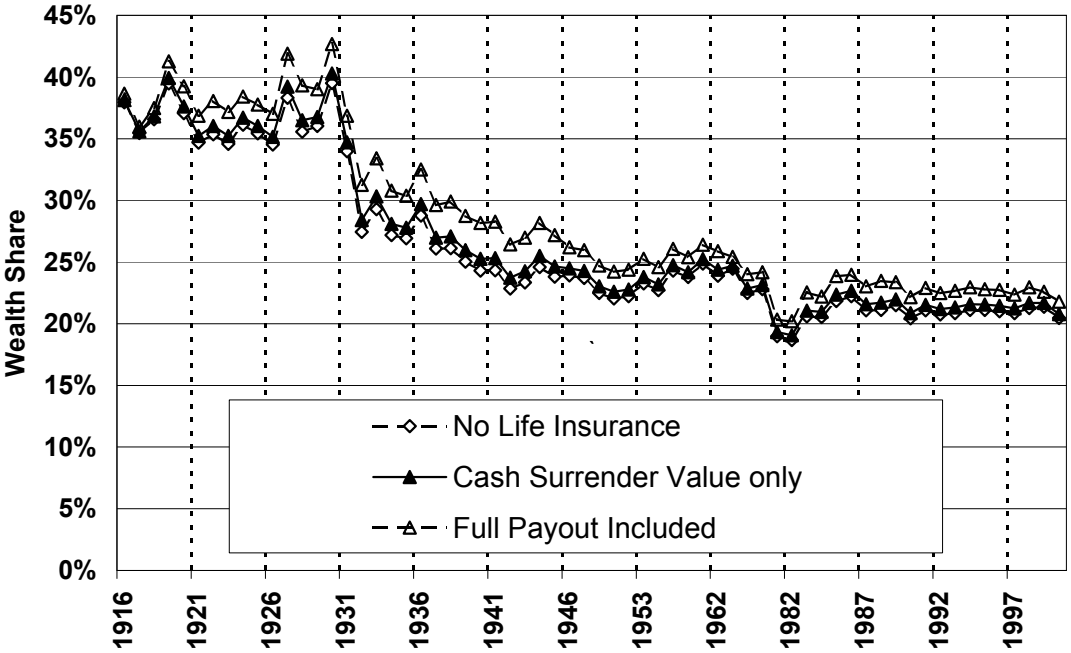

Figure A5

The Top 1% Wealth Share: The Impact of Life Insurance

Note: The Series No Life Insurance excludes completely life insurance payments from the numerator. The series Cash Surrender Value only includes only the cash surrender value of life insurance (as in all our series reported in Table B1). The series Full Payout includes the full value of life insurance reported on estate tax returns. For all three series, the denominator is the same and defined as in Table A, and includes life insurance reserves.

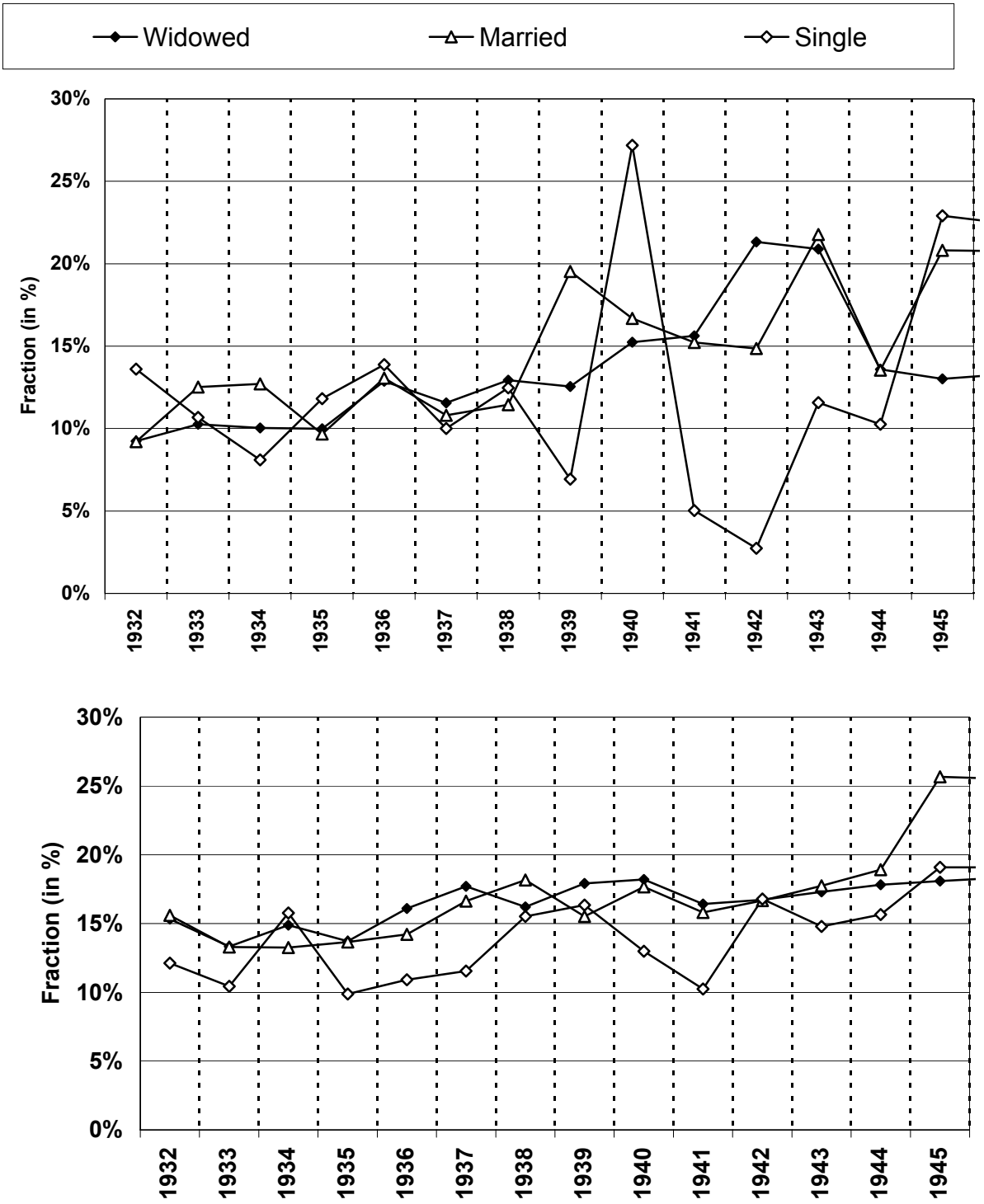

Figure A6

Marital status of top wealth-holders located in the community property states

(Upper panel: top .05%. Lower panel: top .25-.05%)